S2030-1

Cover: Irrigation ditches carry water from mountain watersheds and wells to Hawaiian Commercial & Sugar Company's sugarcane fields on Maui.

STATISTICS OF HAWAIIAN AGRICULTURE
1987

Prepared by
HAWAII AGRICULTURAL STATISTICS SERVICE
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A Cooperative Function of

Hawaii
Department of Agriculture
Marketing Division

United States
Department of Agriculture
National Agricultural Statistics Service

EXECUTIVE CHAMBERS
HONOLULU

JOHN WAIHEE
GOVERNOR

MESSAGE FROM GOVERNOR JOHN WAIHEE

"Statistics of Hawaiian Agriculture" contains information essential to the planning of strategies for diversified agriculture. It provides us with a foundation from which change is measured. It identifies and tracks the multiplier effect on our major agricultural products in terms of value-added, giving us a realistic view of agriculture's position within the State's economic structure.

Plans are underway at the University of Hawaii on both the Manoa and Hilo campuses to address this very topic. The Governor's Agricultural Coordinating Committee is considering funding a study that will develop the details for implementation. Value-added sources, uses and benefits will be a major agenda item at the Second Annual Agribusiness Symposium in Hilo this fall.

It will take the cooperation and support of all the agricultural leaders in this great State to make this effort successful. With your help, we will meet our State's important agricultural goals.

JOHN WAIHEE

JOHN WAIHEE
GOVERNOR

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The Hawaii sugar industry, featured in this issue of "Statistics of Hawaiian Agriculture", is one of the most efficient and innovative agricultural industries in the entire world. Although diversified agriculture gets a lot of attention because it is relatively new and has an impressive growth pattern, sugar is still the major contributor of jobs and had a value after processing of over $335 million in 1987. The assistance of the Hawaii Sugar Planters' Association in providing much of the information and pictures is greatly appreciated.

The farm value of diversified agriculture, led by the floriculture industry with $55 million, topped $239 million in 1987. Both totals are record highs for each item.

This annual summary is published by the Hawaii Agricultural Statistics Service under the cooperative program between the Hawaii Department of Agriculture and the National Agricultural Statistics Service, U.S. Department of Agriculture. We welcome Homer "Red" Rowley, our new State Agricultural Statistician, replacing Aubrey Davis who transferred to the New England field office of the U.S.D.A. agency.

Yukio Kitagawa

Yukio Kitagawa
Chairperson, State Board of Agriculture

Island Fresh

Hawaii
Department of Agriculture
Marketing Division

United States
Department of Agriculture
National Agricultural Statistics Service

HAWAII
AGRICULTURAL STATISTICS SERVICE
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Normally this letter only relates to the immediate past year in scope as new data is reported in the pages of this annual summary. However, since this is my last opportunity to use this space, it seems appropriate to expand my thoughts beyond what has been the "norm". As I depart to accept new challenges in our New England Agricultural Statistics office in Concord, New Hampshire, I take many pleasant memories with me. The people of Hawaii make this a great place to live and work. It's not easy to leave "paradise".

The consistent, voluntary reporting by Hawaii's farmers and agribusinesses over the last four years has been gratifying. It says you understand the need for timely, accurate statistics that represent agriculture in Hawaii. There is room for improvement and change. The interest in "value added" statistics is rapidly growing. This is an opportunity for Hawaii to be a leader in the nation, for this type of information is not available for an entire agricultural industry for any state. The constraints of tighter budgets and smaller staffs will require that the agriculture industries get more directly involved in the financial support of maintaining existing programs and initiating new projects.

My replacement, Homer "Red" Rowley, from our Virginia office is excited about coming to Hawaii. He will bring a different work experience and new ideas to the job, but his commitment to providing vital information to data users across this great State will not change. The achievements of this office would have been impossible without the dedication of our well-trained, highly motivated staff. I will greatly miss the working relationship I have with each of them.

One last acknowledgement goes to Susie Peterson and the Hawaii Department of Agriculture for the superb association and support this office has received under the cooperative agreement between the State and U.S. Departments of Agriculture. This cooperative agreement is unique in its magnitude when compared with our other 43 field offices nationwide. The extent of the commodities covered as specialty crops and the county and sub-county detail provided are unsurpassed.

This has been an exceptionally enjoyable and rewarding work experience.

Mahalo and Aloha,

Aubrey R Davis

Aubrey R. Davis
State Agricultural Statistician

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125 Years

1863-1988

National Agricultural Statistics Service

Fact Finding for Agriculture

The Spirit of Cooperation

125 Years

The Spirit of Cooperation

This year marks the 125th anniversary of the National Agricultural Statistics Service (NASS).

To people at NASS, this is more than an anniversary -- *it's a celebration of the spirit of cooperation between them and the many organizations who work together to produce agricultural statistics.*

A year after the U. S. Department of Agriculture was formed, the first Crop Report was published in 1863. That marked the beginning of the collection of monthly agricultural statistics by a government agency.

By the late 1800's, statistics offices were being established across the country, slowly linking the agricultural data system into a national network.

During this same period, several states were following the lead of the national service to establish their own "*State Crop Reporting Services.*"

As separate state and federal statistical systems developed, two problems occurred. One was the duplication of effort in having two separate offices, maintaining lists of correspondents, and communicating with everyone concerned. More serious, however, was that the separate state and federal reports did not always agree and caused confusion among those the statistics were meant to serve.

As a result, the state and federal agencies sought a way to combine resources. The result was the initiation of the first cooperative agreements with the primary purpose to "*eliminate two separate and entirely distinct reporting systems by creating a single unit to avoid inaccuracies or conflicting estimates.*"

The principle of the cooperation has weathered the test of time. Cooperative agreements now form the foundation of the Federal/State statistical system. Cooperative agreements are currently in place in all 50 States and are usually between NASS and State Departments of Agriculture or the land grant university systems. In Hawaii, this cooperative effort, the Hawaii Agricultural Statistics Service (HASS), began in 1955.

The greatest beneficiary of this cooperative effort is the agricultural community and the general public. The joint effort requires a smaller outlay of public funds than would individual efforts to provide the same information. Finally, it also reduces the reporting burden on the individual, farm, ranch, or agricultural business.

As an agency, the National Agricultural Service takes great pride in the state cooperative program and the association with the National Association of State Departments of Agriculture.

125 Years of Helping Farmers

HAWAII AGRICULTURE 1987

Farm level returns from Hawaii's agriculture were pegged at $557 million for 1987, slipping 1 percent below the previous year. The main culprits for this decline were the weather and lower sugar prices. Unfavorable weather during the year adversely affected yields of many crops including sugar, macadamia nuts, and coffee. Lower prices and weather-reduced yields caused returns from the State's largest agricultural commodity, sugar, to decline 7 percent and thereby offset another record year turned in by diversifed agriculture. When including the processed values of sugar and pineapple, the contribution of agriculture to the State's economy rose to $827 million, 1 percent less than 1986. The absence of data regarding the value added to other commodities prevents a comparison of the total value of agriculture. Diversified agriculture had farm receipts of $239.7 million for the year, 4 percent greater than 1986. Floriculture, the leader in the group of commodities in diversified agriculture turned in a record high year in 1987. Macadamia nut growers saw their farm value hold about even with the previous year as record high prices offset lower yields. Record high milk receipts and higher beef cattle prices contributed to a 5 percent increase in the value of the livestock industry.

SUMMARY: Acreage in crop and total farm acreage, by islands, 1983-87

Year	Sugarcane	Pineapples[1]	Vegetables and melons[2]	Fruits (excluding pineapples)	Coffee	Macadamia nuts	Miscel-laneous crops[3]	Total farm acreage[4]
				1,000 acres				
				STATE[5]				
1983	194.3	36.0	5.1	6.1	2.0	16.4	12.2	1,960
1984	188.4	35.0	5.3	6.5	2.0	17.5	12.0	1,950
1985	187.9	34.5	5.4	6.5	2.1	20.9	[6]8.5	1,950
1986	184.3	36.0	5.4	6.8	2.3	21.2	5.2	1,950
1987	**181.1**	**36.1**	**5.6**	**7.0**	**2.3**	**21.5**	**5.8**	**1,950**
				HAWAII				
1983	75.6		1.9	4.4	2.0	15.0	1.1	1,145
1984	70.9		2.0	4.6	2.0	15.9	1.7	1,140
1985	69.9		2.0	4.8	2.1	19.1	3.2	1,140
1986	69.1		1.9	5.2	2.3	19.4	2.7	1,140
1987	**68.5**		**1.9**	**5.3**	**2.3**	**19.5**	**2.8**	**1,140**
				KAUAI/NIIHAU				
1983	44.1	*	.1	.7		[7]	.7	275
1984	43.9	*	.1	.9		[7]	.7	275
1985	43.7	*	.1	.9		[7]	[6].6	275
1986	43.2	*	.1	.8		[7]	.6	275
1987	**43.0**	*	**.1**	**.8**		[7]	**.6**	**275**
				MAUI/MOLOKAI/LANAI				
1983	47.4	24.5	1.8	.2		[7]	8.9	420
1984	47.2	23.2	1.8	.2		[7]	9.0	420
1985	47.2	23.0	1.9	.1		[7]	4.1	420
1986	46.1	24.0	2.0	.1		[7]	1.2	420
1987	**43.9**	**23.7**	**2.2**	**.1**		[7]	**1.6**	**420**
				OAHU				
1983	27.2	11.5	1.3	.8		[7]	1.5	125
1984	26.4	11.8	1.4	.8		[7]	.6	120
1985	27.1	11.5	1.4	.7		[7]	.6	120
1986	25.9	12.0	1.4	.7		[7]	.7	120
1987	**25.7**	**12.4**	**1.4**	**.8**		[7]	**.8**	**120**

* = Less than 500 acres.

[1] Land used for pineapple.

[2] Harvested acreage.

[3] Includes taro, seed corn, feed and forage crops (excluding pineapple feed products), and flowers, foliage and nursery products.

[4] Includes land not in crop and pasture such as farm house lots, roads, woodlots, etc.

[5] Sum of island estimates may not add to State total due to rounding.

[6] Revised.

[7] Island data not shown separately to avoid disclosure of individual operations but combined and included in the State total.

SUMMARIES

SUMMARY: Number of crop farms, by islands, 1983-87

Year	Sugar	Pineapples	Vegetables and melons	Fruits (excluding pineapples)	Coffee	Macadamia nuts	Taro	Flowers and nursery products
				STATE				
1983	230	18	683	724	610	600	155	680
1984	185	18	677	800	615	605	137	670
1985	155	18	715	805	620	610	155	[1]675
1986	120	18	750	793	620	645	140	635
1987	**100**	**12**	**660**	**774**	**620**	**650**	**140**	**670**
				HAWAII				
1983	219		300	445	610	595	67	320
1984	174		310	520	615	595	57	315
1985	144		340	535	620	600	72	[1]310
1986	109		400	531	620	630	65	300
1987	**89**		**344**	**518**	**620**	**630**	**68**	**320**
				KAUAI				
1983	5	3	62	80		2	54	25
1984	5	3	62	81		4	50	25
1985	5	3	60	80		4	48	30
1986	5	3	48	78		5	50	25
1987	**5**	**3**	**38**	**70**		**8**	**46**	**30**
				MAUI/MOLOKAI/LANAI				
1983	3	13	80	50		2	25	85
1984	3	13	80	48		3	20	80
1985	3	13	75	45		3	23	85
1986	3	13	85	47		7	20	75
1987	**3**	**7**	**92**	**43**		**9**	**19**	**90**
				OAHU				
1983	3	2	241	149		1	9	250
1984	3	2	225	151		3	10	250
1985	3	2	240	145		3	12	250
1986	3	2	217	137		3	5	235
1987	**3**	**2**	**186**	**143**		**3**	**7**	**230**

[1] Revised.

SUMMARY: Number of livestock operations and total number of farms, by islands, 1983-87[1]

Year	Cattle[2]	Hogs	Milk	Eggs	Broilers	Honey	Total (non-duplicated)[3]
				STATE			
1983	950	650	90	55	9	27	4,500
1984	850	650	90	55	8	25	4,600
1985	850	650	90	55	7	22	4,400
1986	800	600	90	55	8	20	4,300
1987	**800**	**600**	**90**	**55**	**8**	**17**	**4,400**
				HAWAII			
1983	450	85	39	26		6	2,600
1984	395	85	40	25		6	2,650
1985	400	85	41	24		7	2,550
1986	365	80	41	25		6	2,500
1987	**380**	**80**	**41**	**25**		**5**	**2,600**
				KAUAI/NIIHAU			
1983	180	120	12	4	1	11	375
1984	165	125	13	4	1	10	375
1985	165	120	13	4	1	8	375
1986	160	110	13	4	1	7	350
1987	**170**	**120**	**13**	**4**	**1**	**5**	**350**
				MAUI/MOLOKAI/LANAI			
1983	235	115	16	6		5	525
1984	215	105	16	6		4	550
1985	205	110	16	7		4	550
1986	200	100	16	7		4	500
1987	**180**	**100**	**16**	**7**		**4**	**500**
				OAHU			
1983	85	330	23	19	8	5	1,000
1984	75	335	21	20	7	5	1,025
1985	80	335	20	20	6	3	925
1986	75	310	20	19	7	3	950
1987	**70**	**300**	**20**	**19**	**7**	**3**	**950**

[1] End of year.

[2] Includes beef, dairy, and dairy replacement operations.

[3] Based on farm definition of $1,000 or more of agricultural sales.

SUMMARIES

SUMMARY: Volume of crop marketings, by islands, 1983-87

Year	Sugar (unprocessed cane)	Pineapples (fresh equivalent)	Vegetables and melons	Fruits (excluding pineapples)	Coffee (parchment)	Macadamia nuts (in shell)	Taro
	1,000 tons		1,000 pounds				
				STATE[1]			
1983	8,926	722	89,400	78,640	2,800	36,420	5,440
1984	8,454	600	87,350	99,430	1,750	37,700	6,310
1985	7,916	565	[2]89,730	80,980	1,850	42,000	6,860
1986	8,379	646	92,000	90,610	3,000	44,000	6,330
1987	**8,014**	**692**	**94,080**	**99,440**	**1,700**	**42,700**	**6,300**
				HAWAII			
1983	3,840		40,100	67,170	2,800	36,200	740
1984	3,420		38,170	75,320	1,750	37,500	795
1985	2,686		[2]37,150	64,030	1,850	41,400	1,010
1986	2,797		33,360	68,110	3,000	43,350	840
1987	**2,566**		**35,990**	**76,240**	**1,700**	**41,300**	**1,280**
				KAUAI			
1983	1,667	*	2,040	5,000		[3]	3,450
1984	1,599	*	1,890	16,450		[3]	4,350
1985	1,802	*	1,690	10,430		[3]	4,780
1986	1,977	*	1,650	14,600		[3]	4,490
1987	**1,912**	*	**1,050**	**15,520**		[3]	**4,170**
				MAUI/MOLOKAI/LANAI			
1983	2,232	509	32,820	2,530		[3]	[3]
1984	2,283	419	32,730	1,420		[3]	[3]
1985	2,208	358	[2]35,670	1,260		[3]	[3]
1986	2,251	415	40,620	1,340		[3]	[3]
1987	**2,236**	**444**	**42,140**	**1,250**		[3]	[3]
				OAHU			
1983	1,187	213	14,440	3,940		[3]	[3]
1984	1,152	181	14,560	6,240		[3]	[3]
1985	1,220	207	[2]15,220	5,260		[3]	[3]
1986	1,354	231	16,370	6,560		[3]	[3]
1987	**1,300**	**248**	**14,900**	**6,430**		[3]	[3]

* = Less than 500 tons.

[1] Sum of island estimates may not add to State total due to rounding of State estimates to 1,000 hundredweight of some crops included in United States totals.

[2] Revised.

[3] Island data not shown separately to avoid disclosure of individual operations but combined and included in the State total.

SUMMARY: Volume of livestock marketings, by islands, 1983-87

Year	Beef (dressed weight)[1]	Pork (dressed weight)	Milk	Eggs	Broilers and chickens (ready-to-cook weight)	Honey
	1,000 pounds		Million pounds	Million	1,000 pounds	
			STATE			
1983	31,985	7,693	143.7	197.3	8,947	1,305
1984	32,116	7,878	146.0	209.7	8,102	1,089
1985	33,928	7,859	139.8	220.5	7,706	1,188
1986	33,764	8,643	153.1	227.0	7,629	1,323
1987	**34,335**	**8,431**	**153.7**	**223.3**	**7,988**	**1,710**
			HAWAII			
1983	20,827	731	[3]	[3]	[3]	[3]
1984	20,906	651	[3]	[3]	[3]	[3]
1985	21,824	700	[3]	[3]	[3]	[3]
1986	22,500	748	[3]	[3]	[3]	[3]
1987	**25,718**	**688**	[3]	[3]	[3]	[3]
			KAUAI/NIIHAU			
1983	2,228	572	[3]	[3]	[3]	[3]
1984	2,132	593	[3]	[3]	[3]	[3]
1985	2,118	689	[3]	[3]	[3]	[3]
1986	2,099	990	[3]	[3]	[3]	[3]
1987	**1,923**	**1,045**	[3]	[3]	[3]	[3]
			MAUI/MOLOKAI			
1983	7,115	1,802	[3]	[3]	[3]	[3]
1984	7,686	1,819	[3]	[3]	[3]	[3]
1985	8,447	1,803	[3]	[3]	[3]	[3]
1986	8,175	1,798	[3]	[3]	[3]	[3]
1987	**5,219**	**1,780**	[3]	[3]	[3]	[3]
			OAHU			
1983	1,815	4,588	112.2	165.1	[3]	[3]
1984	1,392	4,815	112.2	177.7	[3]	[3]
1985	1,539	4,667	107.0	186.4	[3]	[3]
1986	989	5,107	116.5	189.7	[3]	[3]
1987	**1,475**	**4,918**	**115.6**	**179.8**	[3]	[3]

[1] Includes slaughter cattle but excludes calves shipped out-of-State.

[2] State totals may not add due to rounding.

[3] Island data not shown separately to avoid disclosure of individual operations but combined and included in the State total.

SUMMARIES

SUMMARY: Value of crop sales, by islands, 1983-87

Year	Sugar (unprocessed cane)	Pineapples (fresh equivalent)	Vegetables and melons	Fruits (excluding pineapples)	Coffee (parchment)
			1,000 dollars		
			STATE		
1983	266,900	100,376	25,996	[1]14,554	6,300
1984	256,200	89,928	26,609	13,315	4,813
1985	222,400	90,530	[1]30,334	12,794	5,180
1986	233,800	99,720	30,267	16,606	8,700
1987	**218,000**	**99,286**	**29,993**	**17,471**	**4,845**
			HAWAII		
1983	100,000		10,731	[1]12,402	6,300
1984	94,000		10,384	9,360	4,813
1985	69,800		[1]12,549	9,284	5,180
1986	74,100		[1]11,988	12,381	8,700
1987	**64,400**		**11,523**	**13,064**	**4,845**
			KAUAI		
1983	52,400	*	672	634	
1984	52,400	*	594	1,913	
1985	53,300	*	608	1,697	
1986	54,000	*	604	2,112	
1987	**51,200**	*	**433**	**2,327**	
			MAUI/MOLOKAI/LANAI		
1983	73,500	45,099	8,032	503	
1984	72,600	42,176	9,088	343	
1985	63,600	36,380	[1]9,966	255	
1986	67,500	45,540	10,156	311	
1987	**66,900**	**46,366**	**11,111**	**295**	
			OAHU		
1983	41,000	55,277	6,561	[1]1,015	
1984	37,200	47,752	6,543	1,699	
1985	35,700	54,150	[1]7,211	1,558	
1986	38,200	54,180	7,519	1,802	
1987	**35,500**	**52,920**	**6,926**	**1,785**	

See footnotes at end of table.

Continued

SUMMARY: Value of crop sales, by islands, 1983-87 -- Continued

Year	Macadamia nuts (in shell)	Taro	Field crops (not estimated) separately)[2]	Flowers and nursery products[3]	Total crops[4]
			1,000 dollars		
			STATE		
1983	23,928	1,229	6,277	36,165	[1]481,925
1984	26,088	1,382	6,062	38,905	463,502
1985	30,450	1,578	8,198	44,162	[1]445,826
1986	35,200	1,462	6,225	49,132	481,312
1987	**35,868**	**1,701**	**5,907**	**55,767**	**469,048**
			HAWAII		
1983	23,783	185	39	14,316	[1]167,941
1984	25,950	205	142	16,944	161,983
1985	30,015	290	2,615	19,605	[1]149,523
1986	34,680	236	909	22,797	165,976
1987	**34,527**	**476**	**651**	**24,958**	**154,639**
			KAUAI		
1983	[5]	762	1,722	421	56,648
1984	[5]	918	1,716	788	58,351
1985	[5]	1,032	1,716	1,179	59,554
1986	[5]	1,010	1,558	1,146	60,452
1987	[5]	**1,017**	**1,555**	**1,272**	**57,849**
			MAUI/MOLOKAI/LANAI		
1983	[5]	[5]	3,977	4,489	135,934
1984	[5]	[5]	3,832	4,546	132,898
1985	[5]	[5]	3,487	5,188	[1]119,484
1986	[5]	[5]	3,229	5,244	132,647
1987	[5]	[5]	**3,219**	**6,570**	**135,934**
			OAHU		
1983	[5]	[5]	539	16,939	[1]121,402
1984	[5]	[5]	372	16,627	110,270
1985	[5]	[5]	380	18,190	[1]117,265
1986	[5]	[5]	529	19,945	122,237
1987	[5]	[5]	**482**	**22,967**	**120,626**

* = Less than $50,000.

[1] Revised.

[2] Forage and grain crops.

[3] Flowers, foliage, and nursery products.

[4] Total crop values shown for individual islands are actual. Sum of individual commodities may not add to total. Forest product's value combined and included in total crop value.

[5] Island data not shown separately to avoid disclosure of individual operations but combined and included in the State total.

SUMMARIES

SUMMARY: Value of livestock sales, total value of crop and livestock sales, and government payments, by islands, 1983-87

Year	Cattle[1]	Hogs[1]	Milk	Eggs	Broilers and chickens	Other[2]	Total livestock[3]	Total crops and livestock	Government payments[4]
					1,000 dollars				
					STATE				
1983	29,308	7,775	28,869	14,041	5,529	966	86,488	[5]568,413	6,775
1984	28,101	8,088	29,288	15,535	5,189	814	87,015	550,517	2,675
1985	26,632	7,995	28,310	14,020	4,895	971	82,823	[5]528,649	1,184
1986	24,645	8,770	30,605	13,450	4,744	1,191	83,405	564,717	2,810
1987	**27,401**	**8,509**	**31,201**	**14,291**	**5,119**	**1,418**	**87,939**	**556,987**	**344**
					HAWAII				
1983	18,831	785	[6]	[6]	[6]	723	23,873	[5]191,814	401
1984	18,126	729	[6]	[6]	[6]	535	23,233	185,216	458
1985	16,870	760	[6]	[6]	[6]	662	22,122	[5]171,645	508
1986	16,385	778	[6]	[6]	[6]	742	21,982	187,958	204
1987	**20,535**	**707**	[6]	[6]	[6]	**988**	**26,589**	**181,228**	**240**
					KAUAI/NIIHAU				
1983	2,139	633	[6]	[6]	[6]	45	5,111	61,759	101
1984	2,041	668	[6]	[6]	[6]	106	5,203	63,554	47
1985	1,860	758	[6]	[6]	[6]	117	5,071	64,625	44
1986	1,734	1,069	[6]	[6]	[6]	216	5,229	65,681	20
1987	**1,625**	**1,114**	[6]	[6]	[6]	**216**	**5,096**	**62,945**	**17**
					MAUI/MOLOKAI/LANAI				
1983	6,893	1,922	[6]	[6]	[6]	151	12,393	148,327	96
1984	6,889	1,940	[6]	[6]	[6]	125	12,521	145,419	94
1985	6,820	1,935	[6]	[6]	[6]	149	12,215	[5]131,699	598
1986	5,926	1,918	[6]	[6]	[6]	181	11,751	144,398	2,563
1987	**4,317**	**1,934**	[6]	[6]	[6]	**161**	**10,599**	**146,533**	**57**
					OAHU				
1983	1,445	4,435	22,496	11,412	[6]	47	45,111	[5]166,513	6,177
1984	1,045	4,751	22,485	12,809	[6]	48	46,058	156,328	2,076
1985	1,082	4,542	21,710	11,477	[6]	43	43,415	[5]160,680	34
1986	600	5,005	23,358	11,022	[6]	52	44,443	166,680	23
1987	**924**	**4,754**	**23,895**	**11,282**	[6]	**53**	**45,655**	**166,281**	**30**

[1] Excludes interfarm sales; includes out-of-State sales of slaughter cattle and feeder calves.

[2] Includes sheep, wool, turkeys, horses, honey, and beeswax.

[3] Sum of individual commodities may not add to total.

[4] Includes all government payments, such as Agricultural Conservation Program, Cattle Indemnity Payment Program, Dairy Indemnity Payment Program, Emergency Conservation Program, Forestry Incentives Program, Emergency Feed Program, wool payments, and sugar support.

[5] Revised.

[6] Island data not shown separately to avoid disclosure of individual operations but combined and included in State total.

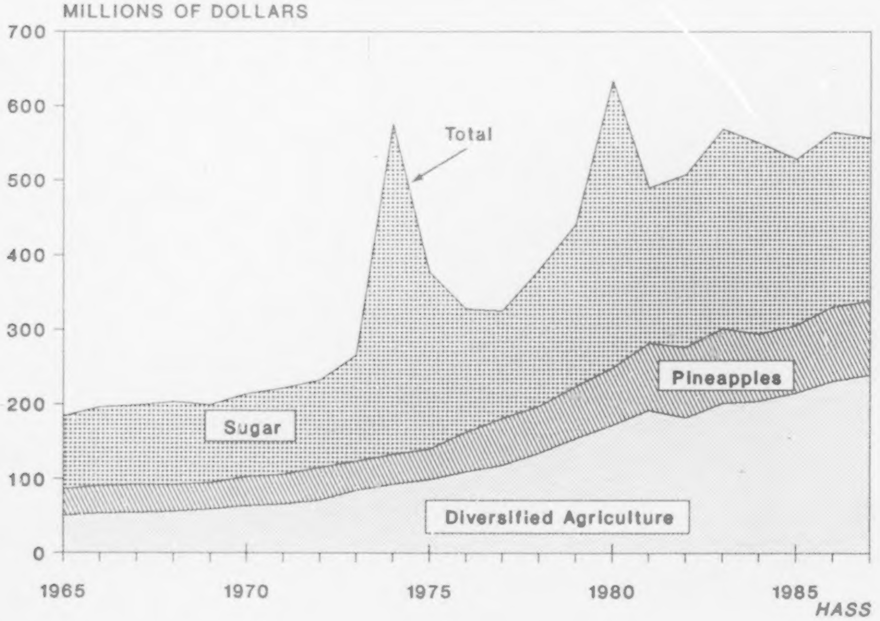
DIVERSIFIED AGRICULTURE SUMMARY

Diversified agriculture ranked by value, State of Hawaii, 1985-87

Crops	Rank			Value of production			Percent of diversified agriculture		
	1985	1986	1987	1985	1986	1987	1985	1986	1987
	Number			1,000 dollars			Percent		
Flowers and nursery products...	1	1	1	44,162	49,132	**55,767**	20.5	21.3	**23.3**
Macadamia nuts.....	2	2	2	30,450	35,200	**35,868**	14.1	15.2	**15.0**
Milk..........................	4	3	3	28,310	30,605	**31,201**	13.1	13.2	**13.0**
Vegetables and melons..................	3	4	4	[1]30,334	30,267	**29,993**	14.1	13.1	**12.5**
Cattle.......................	5	5	5	26,632	24,645	**27,401**	12.3	10.7	**11.4**
Fruits (excluding pineapple)	7	6	6	12,794	16,606	**17,471**	5.9	7.2	**7.3**
Eggs........................	6	7	7	14,020	13,450	**14,291**	6.5	5.8	**6.0**
Hogs	9	8	8	7,995	8,770	**8,509**	3.7	3.8	**3.5**
Forage, grain, and forest products......	8	10	9	8,398	6,425	**6,117**	3.9	2.8	**2.6**
Broilers and chickens	11	11	10	4,895	4,744	**5,119**	2.3	2.0	**2.1**
Coffee	10	9	11	5,180	8,700	**4,845**	2.4	3.8	**2.0**
Taro.........................	12	12	12	1,578	1,462	**1,701**	.7	.6	**.7**
Other livestock	13	13	13	971	1,191	**1,418**	.5	.5	**.6**
Total........................				[1]215,719	231,197	**239,701**	100.0	100.0	**100.0**

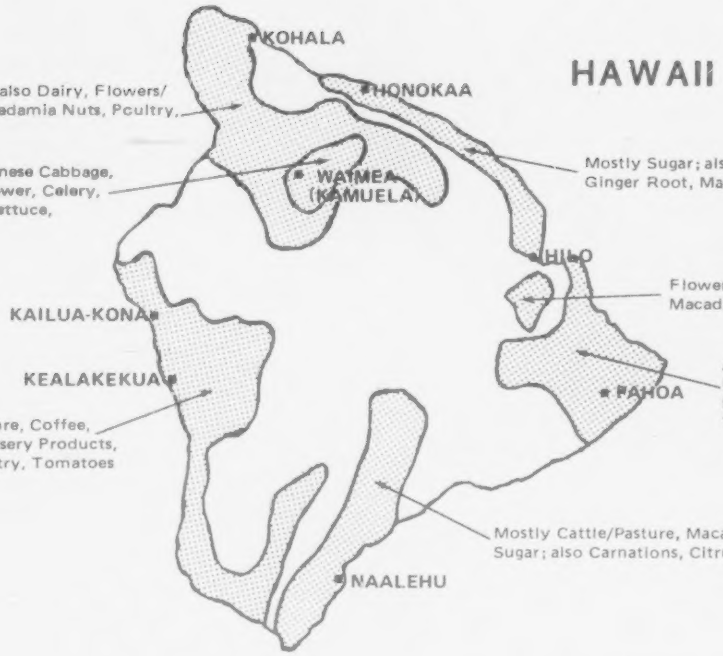
[1] Revised.

CASH RECEIPTS OF AGRICULTURAL COMMODITIES, STATE OF HAWAII, 1965-87



HASS

MAJOR AGRICULTURAL AREAS, STATE OF HAWAII, 1987


HAWAII
KOHALA
HONOKAA
WAIMEA (KAMUELA)
HILO
KAILUA-KONA
KEALAKEKUA
PAHOA
NAALEHU

Mostly Cattle/Pasture; also Dairy, Flowers/Nursery Products, Macadamia Nuts, Poultry, Sheep

Broccoli, Burdock, Chinese Cabbage, Cattle/Pasture, Cauliflower, Celery, Daikon, Dairy, Head Lettuce, Romaine, Roses

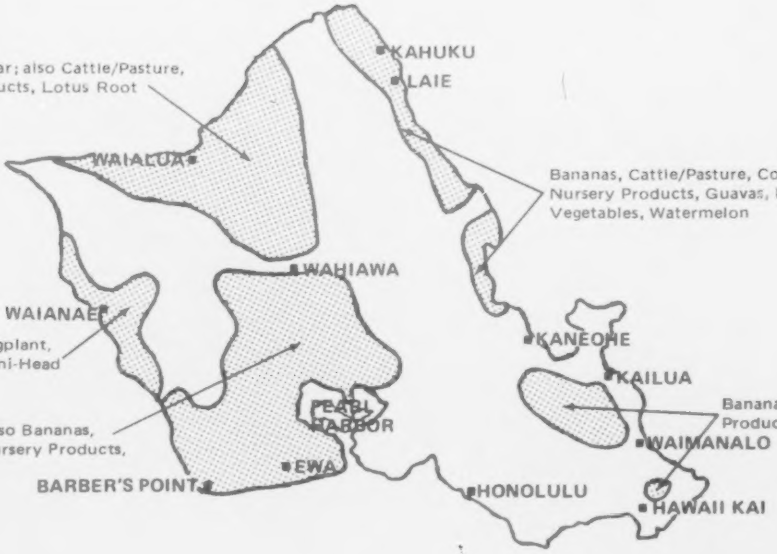
Mostly Sugar; also Cattle/Pasture, Cucumbers, Ginger Root, Macadamia Nuts, Taro,

Flowers/Nursery Products, Guavas, Macadamia Nuts, Poultry

Anthuriums, Bananas, Citrus, Cucumbers, Flowers/Nursery Products, Guavas, Macadamia Nuts, Orchids, Papayas, Tomatoes

Avocados, Cattle/Pasture, Coffee, Eggplant, Flowers/Nursery Products, Macadamia Nuts, Poultry, Tomatoes

Mostly Cattle/Pasture, Macadamia Nuts, Sugar; also Carnations, Citrus, Dairy


OAHU
KAHUKU
LAIE
WAIALUA
WAHIAWA
WAIANAE
KANEOHE
KAILUA
PEARL HARBOR
WAIMANALO
EWA
BARBER'S POINT
HONOLULU
HAWAII KAI

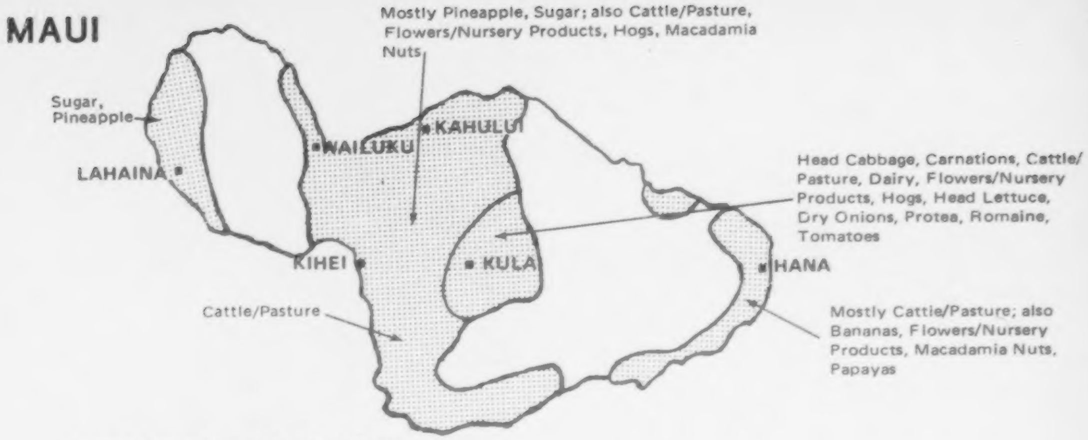
Mostly Pineapple, Sugar; also Cattle/Pasture, Flowers/Nursery Products, Lotus Root

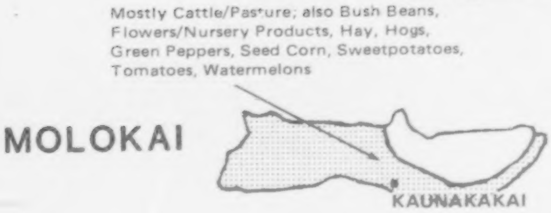
Bananas, Cattle/Pasture, Corn, Flowers/Nursery Products, Guavas, Papayas, Taro, Vegetables, Watermelon

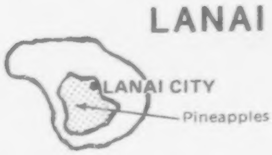
Mustard Cabbage, Daikon, Dairy, Eggplant, Flowers/Nursery Products, Hogs, Semi-Head Lettuce, Green Onions, Poultry

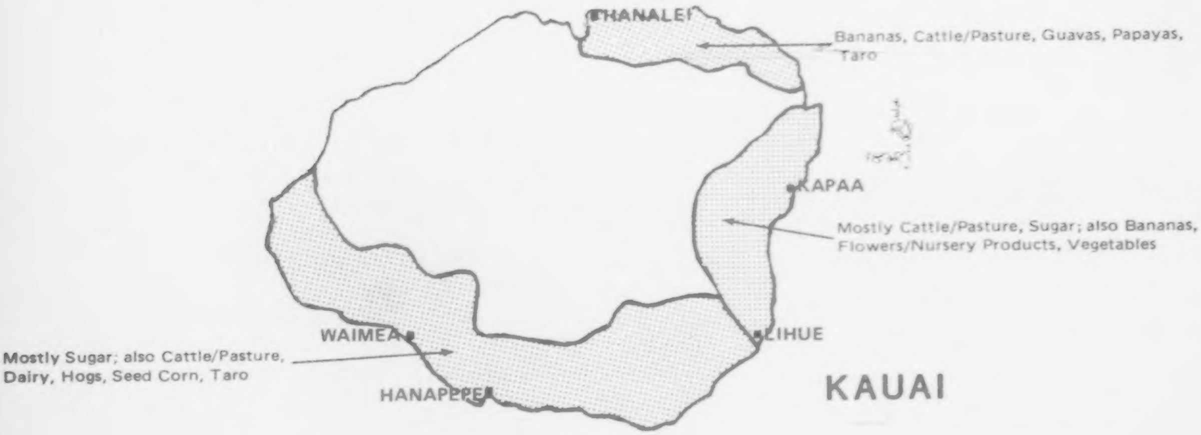
Bananas, Flowers/Nursery Products, Poultry, Vegetables

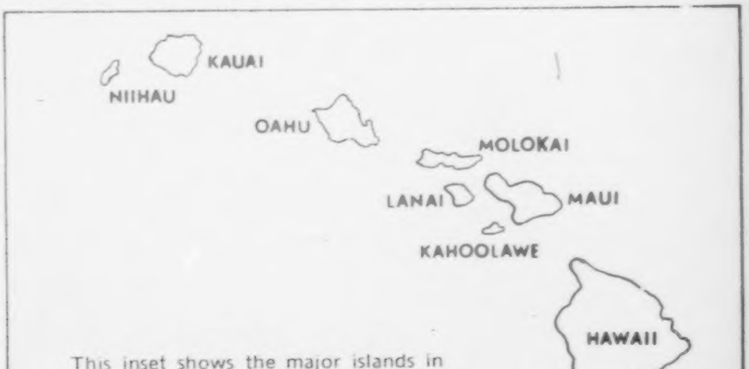
Mostly Pineapple, Sugar; also Bananas, Cattle Feedlot, Flowers/Nursery Products, Watercress


MAUI
Mostly Pineapple, Sugar; also Cattle/Pasture, Flowers/Nursery Products, Hogs, Macadamia Nuts
Sugar, Pineapple
KAHULUI
WAILUKU
LAHAINA
Head Cabbage, Carnations, Cattle/Pasture, Dairy, Flowers/Nursery Products, Hogs, Head Lettuce, Dry Onions, Protea, Romaine, Tomatoes
KIHEI
KULA
HANA
Cattle/Pasture
Mostly Cattle/Pasture; also Bananas, Flowers/Nursery Products, Macadamia Nuts, Papayas


Mostly Cattle/Pasture; also Bush Beans, Flowers/Nursery Products, Hay, Hogs, Green Peppers, Seed Corn, Sweetpotatoes, Tomatoes, Watermelons
MOLOKAI
KAUNAKAKAI


LANAI
LANAI CITY
Pineapples


HANALEI
Bananas, Cattle/Pasture, Guavas, Papayas, Taro
KAPAA
Mostly Cattle/Pasture, Sugar; also Bananas, Flowers/Nursery Products, Vegetables
WAIMEA
LIHUE
Mostly Sugar; also Cattle/Pasture, Dairy, Hogs, Seed Corn, Taro
HANAPEPE
KAUAI

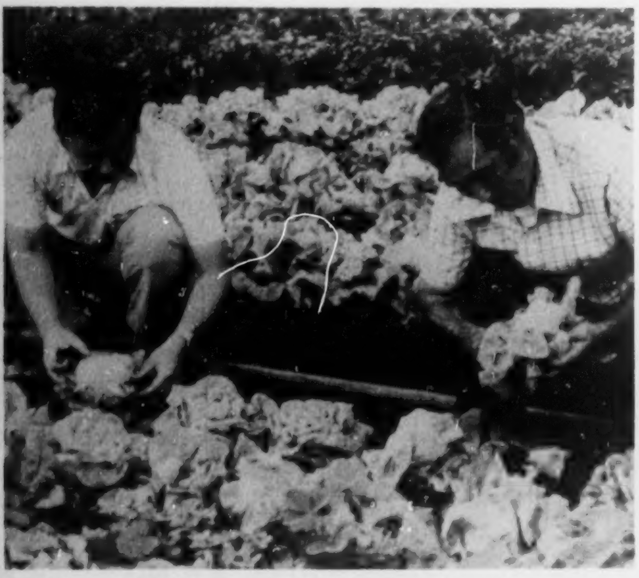

KAUAI
NIIHAU
OAHU
MOLOKAI
LANAI
MAUI
KAHOOLAWE
HAWAII

This inset shows the major islands in their true geographical relationship.

1987 CROP HIGHLIGHTS

Principal crops ranked by value, State of Hawaii, 1985-87

Crops	Rank			Value of production			Percent of all crops		
	1985	1986	1987	1985	1986	1987	1985	1986	1987
	Number			1,000 dollars			Percent		
Sugar	1	1	1	222,400	233,800	**218,000**	49.9	48.6	**46.5**
Pineapples	2	2	2	90,530	99,720	**99,286**	20.3	20.7	**21.2**
Diversified crops:									
Macadamia nuts	3	3	3	30,450	35,200	**35,868**	6.8	7.3	**7.6**
Potted foliage plants	4	4	4	12,019	12,931	**14,883**	2.7	2.7	**3.2**
Papayas	5	5	5	8,579	11,123	**11,050**	1.9	2.3	**2.4**
Anthuriums	6	6	6	7,645	9,878	**8,342**	1.7	2.1	**1.8**
Seed corn	8	8	7	5,170	5,070	**5,020**	1.2	1.1	**1.1**
Coffee	7	7	8	5,180	8,700	**4,845**	1.2	1.8	**1.0**
Ginger root	9	9	9	4,465	4,779	**4,523**	1.0	1.0	**1.0**
Bananas	12	10	10	2,472	2,910	**3,386**	.6	.6	**.7**



Raw **SUGAR** production decreased to 979,000 tons in 1987, down 6 percent from the previous year and the lowest total since 1960. Weather-related problems on the island of Hawaii were the main cause for 1987's output being the lowest in 27 years. Wetter than normal conditions along the windward side of the island prevented preharvest burning of cane on several occasions. This was compounded by volcanic "vog" which prompted a number of nonburning days under Hawaii regulations. Harvesting of unburned fields increased the amount of trash brought to the plant which in turn reduced the amount of sugar that was recoverable. Hawaii's largest agricultural crop also experienced a down year in terms of returns with the value of raw sugar estimated at $325.0 million down 7 percent from 1986.

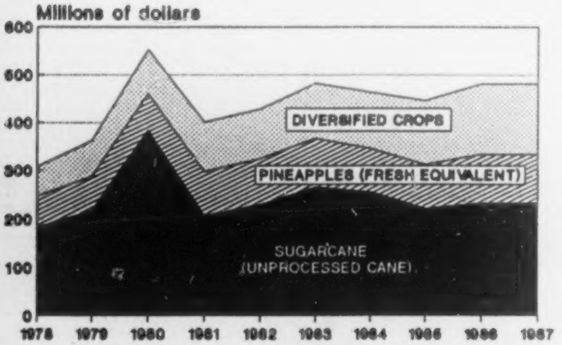
Hawaii's 1987 **PINEAPPLE** crop is estimated at 692,000 tons, 7 percent more than the 1986 crop and the second largest total since 1975. Generally favorable weather and changing agronomic practices which allowed more year-round harvesting are credited with increasing production. After including the value added from processing, the pineapple industry rang up a record $251.4 million contribution to the State's economy last year.

The **FLORICULTURE** industry registered a record year as sales hit $55.8 million in 1987, up 14 percent from 1986. While all major segments of the industry showed increases, **FOLIAGE** crops continued its leadership position with combined sales of $19.2 million. **CUT FLOWERS** stayed second in sales with a 2 percent increase to $16.1 million. Although **ANTHURIUMS** remained the leading cut flower, bacterial blight was a major problem to many growers last year and was mainly responsible for a 15 percent decline in flowers sold. **ORCHIDS** accounted for 22 percent of the total increase experienced by the floriculture industry by boosting its sales to $7.2 million. Sales of **SINGLE AND LEI FLOWERS** rose to $5.3 million largely on the strength of a 126 percent increase in **TUBEROSE** sales offsetting declines for many other flowers.

MACADAMIA NUT marketings totaled 42.7 million pounds (wet in-shell basis) during the 1987-88 season, down 3 percent from the previous season's record output. While weather conditions were less than ideal in all growing areas, they were particularly unfavorable in the Kona district of Hawaii island. Dry conditions from winter through early spring adversely affected nut sets throughout the Kona area. Some farmers also felt that subsequent rains, turned acidic by volcanic fumes drifting over from the windward side of the island, further hampered nut setting. Despite the decline in production, a record high farm price of 84.0 cents per pound (wet in-shell basis) enabled macadamia nut growers to post increased farm revenues of $35.9 million.

VEGETABLE and **MELON** farmers harvested 94.1 million pounds of produce during 1987, up 2 percent from the previous year. **HEAD CABBAGE** regained the top spot it lost to watermelons the previous year by marketing 15.0 million pounds, up 7 percent from 1986. **WATERMELONS** fell to a close second at 13.8 million pounds, down 3 percent from the previous year. Record acreage for harvest produced the largest **GINGER ROOT** crop ever during 1987 at 10.0 million pounds, up 70 percent from the previous season. Of the remaining vegetables, **CHINESE CABBAGE**, **SWEET CORN, DRY ONIONS,** and **GREEN PEPPERS** were a few that experienced increased output during 1987. Among those that showed relatively large percentage declines in production were **BROCCOLI**, **CARROTS**, **CAULIFLOWER**, **LETTUCES**, and **SWEETPOTATOES**.

TOTAL VALUE OF CROP SALES
STATE OF HAWAII, 1978-87

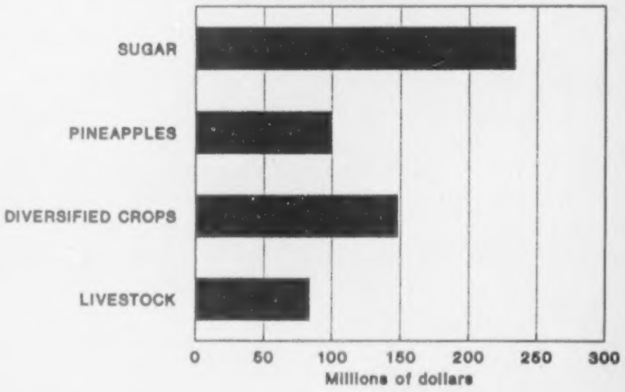


Diversified **FRUITS** (which excludes **PINEAPPLES**) had total production of 99.4 million pounds during 1987, up 10 percent from 1986. Although the **PAPAYA** industry encountered several obstacles during 1987, it remained the State's top diversified fruit with total production of 67.0 million pounds, a 10 percent increase from 1986. Adverse weather and a week long quarantine of out-of-State shipments kept harvests below expected levels, but near peak production from orchards planted during late 1985 through early 1986 helped farmers achieve their second largest crop on record. Good growing weather, improved cultural practices, and a strong market enabled **GUAVA** growers to increase production for the third straight year to a record 18.0 million pounds, up 5 percent from 1986. A new record high was also established by **BANANA** growers with 1987 output pegged at 11.4 million pounds, up 18 percent from the previous year. Contributing heavily to the increased banana output was a 9 percent increase in harvested acreage which surpassed the 1,000-acre mark for the first time in 20 years. Overall, these three fruits accounted for 97 percent of the total production from diversified fruits.

TARO farmers had a combined production of 6.3 million pounds during 1987, down fractionally from 1986. The decrease in production is traced to a 2 percent decline in processed taro which mainly consists of poi. Kauai's Hanalei Valley, the State's principal growing area of taro for poi, experienced rainy weather for most of last year. Periodic floods and cloudy skies slowed crop development resulting in smaller corms being harvested for much of 1987. Fresh sales, predominately Chinese or other dryland taro varieties, offset some of the decline by rebounding from 1986's drought reduced output to register a 22 percent increase at 600,000 pounds in 1987. Most of the State's dryland taro is grown on the windward side of Hawaii island.

COFFEE production is estimated at 1.7 million pounds (parchment basis) for the 1987-88 season, down 43 percent from the previous season and the smallest crop in 5 harvests. Rainfall in the Kona district of Hawaii island, the State's major growing area, was down 50 percent from normal during the first 6 months of last year. The insufficient amount of rainfall hindered flowering and berry setting which normally occurs during this period when increasing showers are needed to ensure a good harvest. An increase in the amount of bearing acreage offset some of the decline in production. Farm prices were also down during the 1986-87 season at an average of $2.85 per pound (equivalent parchment basis), 2 percent below the previous season. Despite the drop in farm price, last year's return ranks as the second highest on record. Lower green coffee prices on the world market was the main reason for the drop in local farm prices.

AGRICULTURAL VALUES
STATE OF HAWAII, 1987

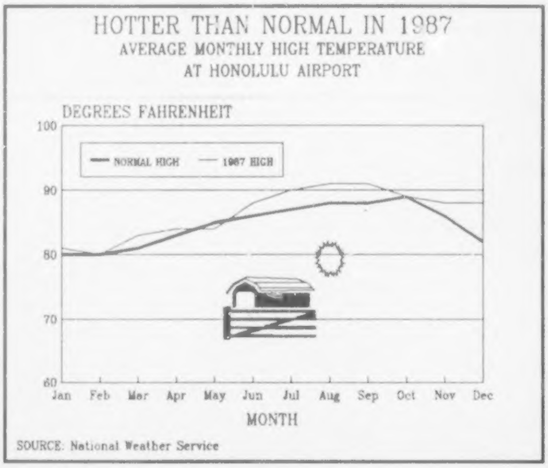


1987 WEATHER REVIEW

JANUARY - MARCH A hint of things to come occurred early in the year when temperatures occasionally climbed to record daily highs. The unusually warm weather encountered during the first two weeks prompted speculation that Hawaii would experience a repeat of 1982-83's "El Nino" weather. El Nino is a global weather phenomenon which partly results in warmer than normal ocean temperatures in the eastern Pacific. This anomaly increases the possibility of a drier Hawaiian winter and the appearance of hurricanes. The initially warm weather, however, was soon replaced by cool temperatures, gusty winds, and sometimes heavy showers. A rare occurrence of frost then hit the Volcano area of Hawaii island in early February and caused severe damage to vegetable and floriculture crops. Losses did not greatly impact on State supplies as the Volcano district is not a major growing area of agricultural products. Also in February, the State experienced a problem that it would periodically encounter throughout the year - volcanic haze. Volcanic activity in the Puna district of Hawaii island was in its 48th eruptive phase having been in continuous activity for over 200 days. Volcanic ash, and fumes causing "acid" rain would be blamed by some of the Big Island's Puna district flower, and Kona district coffee and macadamia nut farmers for reducing their yields. By March, more spring-like weather prevailed over the islands allowing crops an opportunity to recover from the previously adverse weather. With the exception of February, rainfall was below normal in most areas. The lack of rainfall was not of immediate concern to farmers as reservoir levels remained adequate.

APRIL - JUNE Weather conditions were generally beneficial through April except for some gusty winds. The winds hindered the development of crops in exposed areas and were strong enough to force the cancellation of some barge service between the islands in the early part of April. In a switch from the first quarter, daytime temperatures cooled considerably. A north wind blew over the islands in late April and early May producing several days of record lows. Crop progress was further limited when this cold spell was followed by a period of intense rainfall which resulted in some farm losses. The heavy rains, however, benefitted some agricultural sectors by replenishing soil moisture and filling reservoirs. Mostly sunny skies, interspersed with light to moderate showers, returned by late May and continued through June.

JULY - SEPTEMBER Daily high temperatures averaged in the 90's for each of these three months. As an indication of how hot it was statewide, the National Weather Service's Honolulu Airport station reported thermometer readings which matched or exceeded previous daily record highs on 43 occasions during this quarter. Honolulu's all-time high of 94 degrees was also matched on September 5th. Clear skies, light trade winds, and warmer than normal ocean temperatures were noted as contributing factors for the heat wave. Weather officials were now certain that Hawaii was on the fringe of an "El Nino" system. Although rainfall reached moderate intensity at times, most of it fell at night and provided little relief from the daytime heat. Many non-irrigated crops showed signs of heat stress while irrigated crops fared better. Pest population also rose in light of the dry conditions and forced farmers to increase spray programs. A decline in milk and egg yields was also blamed on the heat stress placed on livestock. Water conservation measures were implemented in the Big Island's Waimea district, one of the State's major vegetable regions, for a brief period in September.


HOTTER THAN NORMAL IN 1987
AVERAGE MONTHLY HIGH TEMPERATURE
AT HONOLULU AIRPORT

SOURCE: National Weather Service

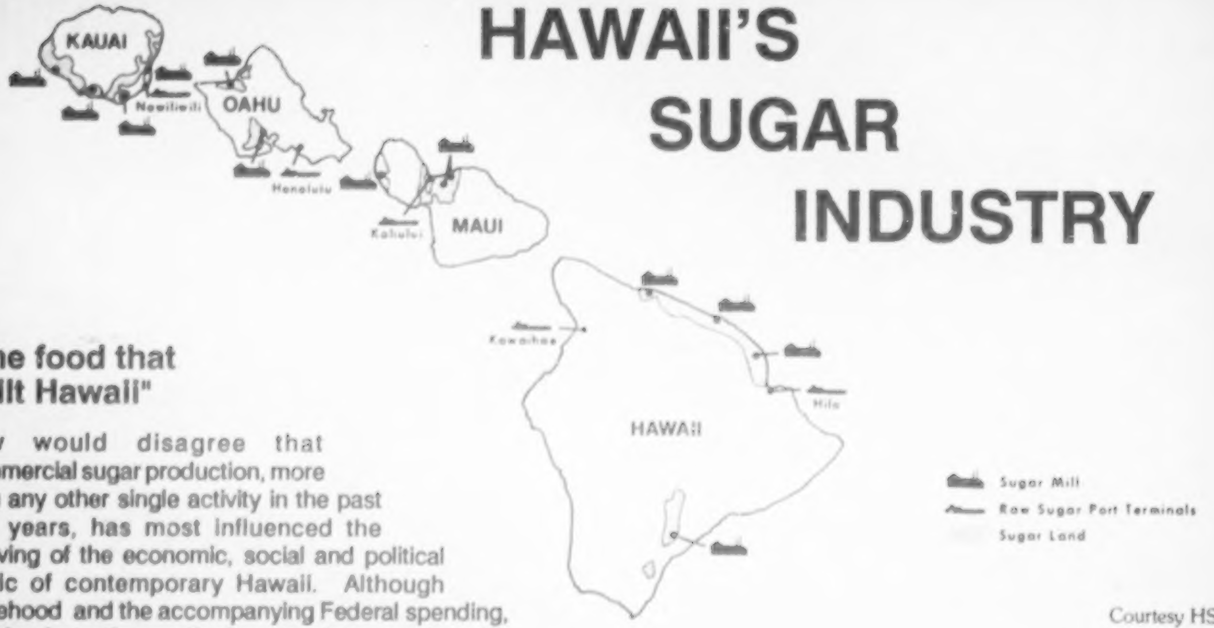
OCTOBER - DECEMBER The 90-degree weather persisted into the first half of October and continued to adversely affect crop and livestock production. Cooler weather conditions began to prevail by mid-month as cloud cover and shower activity increased. By December, frequent showers began causing a general slowdown in agricultural activity. An intense wind and rain storm hit the islands in mid-December flooding many windward areas. Banana orchards on Kauai suffered extensive tree losses while supplies of other vegetable crops would be lowered for weeks to come. Another heavy outburst of rain occurred on New Year's Eve. Water run-off was particularly damaging as the ground was already soaked by previous rains. Windward areas of Kauai and Oahu were hardest hit with agricultural losses estimated to have exceeded $500,000. It would not be until the first quarter of 1988 that most farmers would recover.

WEATHER: Precipitation, selected stations, State of Hawaii, 1987

STATIONS	YEAR & NORMAL	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual	% OF NORMAL
SLAND OF HAWAII															
Hawaii National Park Hq. 54	Normal	10.61	10.23	11.75	10.10	7.75	4.67	5.23	7.20	4.58	6.89	11.47	12.33	102.81	
	1987	6.83	1.81	4.04	7.52	8.33	6.10	7.78	1.91	6.73	7.74	10.60	28.41	98.30	95.6
Hilo (285)	Normal	9.07	12.90	13.69	12.88	10.07	6.61	9.54	10.88	7.44	10.96	13.77	15.76	133.57	
	1987	10.30	5.50	4.70	6.40	19.60	9.70	17.90	4.80	8.70	15.70	16.20	20.90	140.40	105.1
Kealakekua (HI84)	Normal	3.50	2.40	3.80	4.10	5.90	6.10	6.80	8.70	8.00	6.20	3.60	2.10	61.20	
	1987	.70	1.40	2.20	1.90	5.80	1.10	7.80	11.50	4.70	2.30	3.70	8.40	51.50	84.2
Naalehu 14	Normal	7.97	5.85	5.53	2.70	2.18	1.79	1.58	3.92	3.36	3.88	5.21	4.57	48.54	
	1987	M	.41	1.23	1.40	2.66	2.56	3.01	1.01	5.13	2.67	3.01	24.47	47.56	98.0
Pahoa (HI83)	Normal	11.02	13.17	15.16	12.59	11.87	8.10	10.20	11.13	8.50	11.81	14.28	17.28	145.11	
	1987	8.20	5.20	6.20	6.30	16.50	9.80	20.50	5.30	14.80	20.30	13.90	15.80	142.80	98.4
Waimea (HI86)	Normal	4.21	3.78	3.97	3.55	2.20	1.57	2.31	2.52	1.07	2.03	2.78	4.84	34.83	
	1987	18.10	4.70	3.00	9.30	10.90	4.00	6.60	1.80	.90	4.70	7.60	6.60	78.20	224.5
SLAND OF KAUAI															
Eleele 927	Normal	5.74	3.39	3.28	2.39	1.74	1.10	1.33	1.79	1.40	2.61	3.60	5.12	33.49	
	1987	M.45	M1.17	M	1.60	.92	1.07	1.15	1.61	2.17	5.86	1.56	13.02	30.58	91.3
Kekaha 944	Normal	4.63	2.57	2.37	1.56	1.04	.25	.39	.75	.74	1.72	2.18	4.24	22.44	
	1987	.31	1.06	.38	1.03	.01	.53	.30	.60	1.67	2.58	.29	14.48	23.24	103.6
Wailua (HI40)	Normal	9.42	7.09	8.28	7.07	5.45	4.07	5.68	6.60	4.65	7.45	9.03	9.41	84.20	
	1987	1.90	4.20	2.30	8.90	7.10	5.30	6.80	5.90	5.90	12.20	11.20	16.50	88.20	104.8
SLAND OF LANAI															
Lanai Airport (LNY)	Normal	5.50	1.40	1.60	.90	.70	.20	.50	.60	.70	1.60	1.20	2.30	17.20	
	1987	.29	1.70	.41	1.79	2.04	.35	M1.81	.34	1.37	.39	2.37	4.74	17.60	102.3
SLAND OF MAUI															
Hamakuapoko HC&S 485	Normal	5.10	4.85	5.81	4.50	2.83	2.39	3.60	3.65	1.89	3.69	5.07	6.73	50.11	
	1987	5.20	2.60	2.68	7.64	7.09	2.89	3.21	1.86	1.69	1.70	7.77	7.14	51.47	102.7
Hana Airport 355	Normal	9.47	7.93	8.85	7.14	5.70	3.82	5.28	5.78	4.85	6.48	8.16	6.76	80.22	
	1987	7.29	14.13	3.50	10.87	10.10	7.01	8.39	4.45	5.49	5.46	6.56	8.56	91.81	114.5
Kihei 311	Normal	3.67	1.76	2.03	.79	.27	.10	.15	.19	.07	.68	1.69	2.39	13.79	
	1987	1.34	.92	.03	3.31	.93	.17	.00	.00	.02	.00	1.06	6.25	14.03	101.7
Kula (HI65)	Normal	5.64	3.45	3.53	2.98	2.20	1.41	2.17	2.07	1.93	1.91	2.95	3.61	33.85	
	1987	3.90	1.40	2.10	4.80	3.10	.10	.70	.40	2.60	.20	2.00	6.20	27.50	81.2
Lahaina 361	Normal	3.70	1.65	2.04	.93	.48	.09	.21	.33	.23	.90	2.07	2.86	15.49	
	1987	.51	1.98	.00	2.31	3.04	.03	.02	.00	.50	.00	3.85	M7.48	19.72	127.3
Wailuku (HI66)	Normal	4.88	3.81	4.16	2.41	1.02	.43	.74	.77	.49	1.86	2.79	4.65	28.01	
	1987	4.70	4.20	1.70	7.20	12.80	.60	.90	1.10	2.50	1.20	5.50	6.50	48.90	174.6
SLAND OF MOLOKAI															
Molokai Airport (MKK)	Normal	4.64	2.84	3.90	1.90	1.14	.48	.74	.76	.70	1.59	3.48	4.37	26.54	
	1987	2.80	5.00	1.00	4.40	3.40	.10	+	--	.00	.30	3.20	10.80	31.00	116.8
SLAND OF OAHU															
Kahuku (HI09)	Normal	4.40	3.10	4.40	2.90	1.90	1.30	1.70	2.10	1.90	2.50	3.40	4.10	33.70	
	1987	1.10	4.30	.50	4.20	2.00	2.90	5.10	1.30	4.50	2.00	2.40	.40	30.70	91.1
Waialua 847	Normal	4.99	3.65	3.84	2.32	1.34	.44	.95	1.26	.67	2.27	3.15	4.64	29.52	
	1987	2.20	3.75	1.62	3.77	1.16	2.30	2.34	.18	2.39	1.90	5.32	13.14	40.07	135.7
Waianae (HI17)	Normal	3.79	3.13	2.31	1.12	.61	.35	.38	.84	.77	1.87	1.81	2.66	19.64	
	1987	.80	1.10	1.40	1.20	+	.70	.40	.80	.60	1.10	1.30	5.00	14.40	73.3
Waimanalo Exp. 795.1	Normal	8.35	3.98	5.80	4.11	2.83	1.22	1.92	1.88	1.81	3.59	6.31	6.26	48.06	
	1987	3.12	4.99	1.07	4.01	2.84	2.28	1.02	1.10	5.02	.96	5.08	16.16	47.65	99.2
Waipahu Sugar 750	Normal	5.00	2.71	3.20	1.88	1.20	.36	.76	.92	.84	2.04	3.35	4.09	26.35	
	1987	.46	1.23	1.50	1.04	.57	1.67	.43	.19	3.54	.73	1.17	13.64	26.17	99.3

M = Incomplete.
-- = No record. Data not recorded, determined unreliable by quality control checks, or not received in time for publication.
+ = Amount less than 0.05.
Source: U.S. Department of Commerce, National Oceanic and Atmospheric Administration.

HAWAII'S SUGAR INDUSTRY



Courtesy HSPA.

"The food that built Hawaii"

Few would disagree that commercial sugar production, more than any other single activity in the past 150 years, has most influenced the weaving of the economic, social and political fabric of contemporary Hawaii. Although Statehood and the accompanying Federal spending, and the dramatic growth of tourism in recent decades has overshadowed Hawaii's major agricultural activity, sugar growing and processing still occupies an important place in the islands' economy. Hawaii's Sugar producers are justifiably proud of their slogan "*SUGAR - THE FOOD THAT BUILT HAWAII*".

Early Polynesians brought sugarcane with them when they first inhabited the Hawaiian Islands over 1,000 years ago but it was not until 1835 that the first successful sugar plantation was started at Koloa, Kauai. From the first two tons of raw sugar milled in 1837 the industry grew to a peak of a million tons in 1932, and has stabilized at around that level annually ever since. Others followed the lead of that early Kauai example and by around 1850, plantations were also established on Oahu, Maui and Hawaii Islands. Today Hawaii's highly mechanized industry has 13 plantations and approximately 90 independent producers growing sugarcane on 181,000 acres located on those same four islands.

In the early stages, the industry was typified by many small plantations that faced common obstacles of drought, labor shortages, trade barriers and lack of money. Through determination and a spirit of cooperation these seemingly insurmountable problems were conquered. As an example, one of the world's most extensive privately-owned irrigation systems was developed to carry water from areas with ample rainfall to other more arid locations. It was a water system built without government assistance that would cost roughly $1.25 billion to replace today.

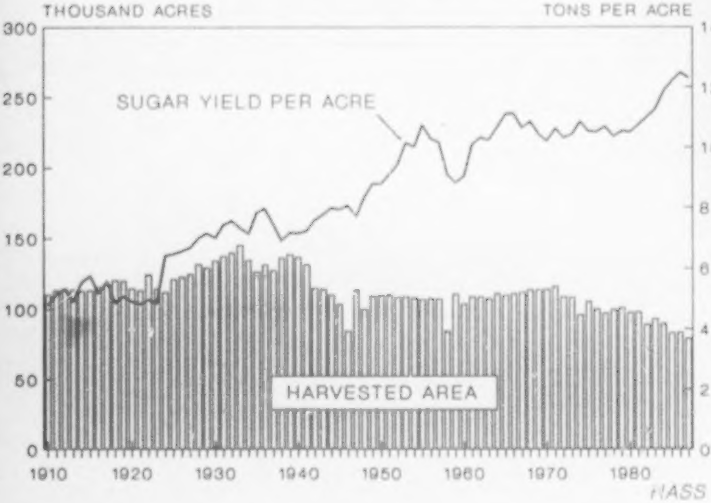
As this new industry grew, so did it's need for large numbers of workers to plant, harvest, and mill the cane. The indigenous Hawaiian population was not sufficient to meet this new demand. Beginning with the first shipload of Chinese in the middle of the nineteenth century and continuing through the first decade of this century, almost 385,000 workers from around the world were brought to Hawaii. Thousands came from China, Japan, the Philippines, Russia, Puerto Rico, Portugal, Korea, Spain and Germany working and living together to this day in unusual harmony for so diverse and unique an ethnic mix.

Best in the world at growing sugarcane

Today, Hawaii can boast of having the most productive, efficient, and technologically advanced sugar industry in the world. Throughout its two-year growing cycle, the most up-to-date cultivation methods are employed. Planting is a mechanized operation where 18-inch cuttings of cane stalk are planted, fertilized, and covered with soil in a single step.

The cuttings grow rapidly and can reach a plant height of 6 feet in 4 months. Crop maintenance is limited to periodic applications of fertilizer and pesticides during the maturation period. Greatly aiding plant growth is the conversion of much of the irrigated acreage from furrow to drip irrigation. Not only has this saved tremendous amounts of precious water, but it has resulted in increased yields and efficient application of fertilizer through this system. A favorable climate allows sugarcane to be grown and harvested year-round in Hawaii. This allows for smaller, more efficient, sugar mills than would be necessary if harvesting was done annually. Harvesting starts by first burning off the dry leaf trash that has accumulated in the fields. Large tractor-mounted rakes cut and arrange the cane in rows. Cranes then load the stalks on large trucks which haul an average of 40 tons of cane to the sugar mills.

HIGHER YIELDS OFFSET DECLINING ACREAGE
HAWAII SUGAR, 1910-1987



Complex processing produces sweet results

After sugarcane is harvested and delivered to a sugar mill, the complex process of extracting raw sugar begins. At these mills, which operate 24 hours a day almost year-round, the cane is first washed, chopped and shredded. Then under tremendous pressure the juice is squeezed out of the cane by giant rollers. The next step is to mix the juice with lime, heat it, remove any foreign matter and then evaporate off most of the water leaving a thick, dark syrup. The syrup then goes to vacuum pans where it is boiled to form raw sugar crystals and molasses. Centrifuges are used to separate the crystals from the molasses by throwing the mixture against a fine screen. Most of the remaining molasses is then removed from the crystals and the raw sugar is ready for further refinement. Hawaii's sugar companies jointly own the California and Hawaiian Sugar Company which is best know by its brand name of "C and H". This cooperative association refines and markets all of the raw sugar and molasses that is produced in Hawaii. Approximately 95 percent of Hawaii's raw sugar output is shipped 2,200 miles to C and H's refinery in Crockett, California. The remaining 5 percent is delivered to C and H's Aiea factory on the island of Oahu which refines enough sugar to meet all of Hawaii's needs as well as some other markets.

WHAT DOES SUGAR MEAN TO HAWAII?

- **Sugar revenues of nearly $4 billion during the past decade.**
- **Mill and field employment of between 6,000 and 7,000 workers.**
- **Annual payroll of $125-130 million. Employment for 15,000 other workers in related industries and business.**
- **Over 180,000 acres of sugarcane that enhance Hawaii's spectacular scenic vistas treasured by residents and visitors alike.**
- **Provides an infrastructure for other agriculture and smaller farmers who would not otherwise be able to benefit from the economies of scale in purchasing supplies, fertilizer and other farming inputs.**
- **Sugar companies provide 10% of the electricity in the State, 40% of which is sold for public use, displacing about 3 million barrels of imported oil annually.**
- **Accounts for 10% of the State's general fund taxes.**

Research keeps Hawaii ahead of others

Hawaii's position as the world's leader in the culture of sugarcane is largely the result of the tremendous emphasis on research. The Hawaiian Sugar Planters' Association, a voluntary, non-profit, incorporated association was established in 1895 by the plantations to maintain, advance, improve, and protect Hawaii's sugar industry. The association's largest program is the Experiment Stations which conducts research dealing with all aspects of sugarcane cultivation. One of their current research projects is aimed at developing seed and planting material using tissue culture. If successful, this method offers hope for further reducing costs by eliminating the need for labor and other inputs necessary to maintain the several thousand acres currently needed to raise seed material each year. Additionally, using this method, new varieties could be propagated faster and for wider distribution.

SUGARCANE

SUGARCANE: Number of farms, acreage, yield, production, price, and value, by islands, 1983-87[1]

Year	Farms[2]	Acreage		Yield per acre (cane)[3]	Production of cane for sugar	Farm price[3]	Value of cane for sugar[4]
		In crop[2]	Harvested for sugar				
	Number	1,000 acres		Tons	1,000 tons	Dollars per ton	Million dollars
				STATE			
1983	230	194.3	92.8	96.2	8,926	29.90	266.9
1984	185	188.4	89.5	94.5	8,454	30.30	256.2
1985	155	187.0	83.0	95.4	7,017	28.10	222.4
1986	120	184.3	83.6	100.2	8,379	27.90	233.8
1987	**100**	**181.1**	**79.5**	**100.8**	**8,014**	**27.20**	**218.0**
				HAWAII			
1983	219	75.6	35.7	107.6	3,840	26.00	100.0
1984	174	70.9	33.6	101.8	3,420	27.50	94.0
1985	144	69.9	28.7	93.6	2,686	26.00	69.8
1986	109	69.1	28.7	97.5	2,797	26.50	74.1
1987	**89**	**68.5**	**28.4**	**90.4**	**2,566**	**25.10**	**64.4**
				KAUAI			
1983	5	44.1	21.1	79.0	1,667	31.40	52.4
1984	5	43.9	21.0	76.1	1,599	32.80	52.4
1985	5	43.7	21.0	85.8	1,802	29.60	53.3
1986	5	43.2	20.9	94.6	1,977	27.30	54.0
1987	**5**	**43.0**	**18.5**	**103.4**	**1,912**	**26.80**	**51.2**
				MAUI			
1983	3	47.4	22.3	100.1	2,232	32.90	73.5
1984	3	47.2	22.5	101.5	2,283	31.80	72.6
1985	3	47.2	22.4	98.6	2,208	28.80	63.6
1986	3	46.1	21.9	102.8	2,251	30.00	67.5
1987	**3**	**43.9**	**20.9**	**107.0**	**2,236**	**29.90**	**66.9**
				OAHU			
1983	3	27.2	13.7	86.6	1,187	34.50	41.0
1984	3	26.4	12.4	92.9	1,152	32.40	37.2
1985	3	27.1	10.9	111.9	1,220	29.30	35.7
1986	3	25.9	12.1	111.9	1,354	28.20	38.2
1987	**3**	**25.7**	**11.7**	**111.1**	**1,300**	**27.30**	**35.5**

[1] Primary data source, Hawaiian Sugar Planters' Association.

[2] At end of year.

[3] Yield and farm price may not compute exactly due to rounding.

[4] Value of cane for sugar estimated by deducting processing and marketing costs from value of sugar and molasses. Processing costs based on toll charges paid by independent producers.

WHAT AN ACRE OF SUGARCANE DOES:

It produces

- 100 tons of harvested sugarcane
- 3.5 tons of molasses
- 12 tons of raw sugar
- 22,465 pounds of refined sugar
- 32 tons of bagasse (equal to 1,344 gallons of fuel oil)
- $4,600 new dollars for Hawaii's economy

It also

- Removes 95 tons of carbon dioxide from the air
- Releases 60 tons of pure oxygen into the atmosphere
- Provides priceless scenic beauty

Courtesy: HSPA

SUGAR: Production of raw sugar and molasses, price, and value, by islands, 1983-87[1]

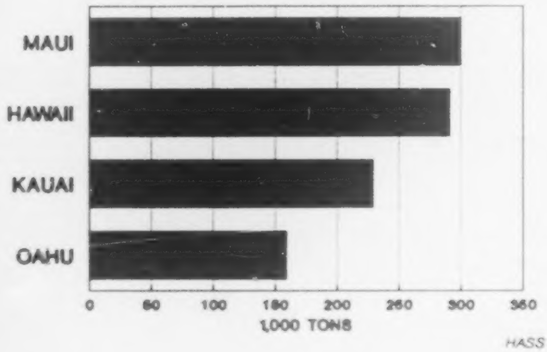
Year	Mill production		Average returns received[3]		Value of production		
	Raw sugar 96°	Molasses[2]	Raw sugar 96°	Molasses[2]	Raw sugar 96°	Molasses[2]	Total
	1,000 tons		Dollars per ton		Million dollars		
				STATE			
1983	1,044	292	380	47.00	396.5	13.7	410.2
1984	1,062	298	360	33.80	382.9	10.1	393.0
1985	1,012	256	328	34.80	331.9	8.9	340.8
1986	1,043	285	334	47.50	348.4	13.5	361.9
1987	**979**	**272**	**332**	**39.90**	**325.0**	**10.9**	**335.9**
				HAWAII			
1983	392	105	379	46.80	148.6	4.9	153.5
1984	391	109	360	33.20	140.6	3.6	144.2
1985	319	78	327	35.40	104.3	2.8	107.1
1986	329	85	333	48.50	109.6	4.1	113.7
1987	**291**	**81**	**330**	**40.50**	**96.0**	**3.3**	**99.3**
				KAUAI			
1983	204	63	381	46.30	77.9	2.9	80.8
1984	217	62	361	34.30	78.3	2.1	80.4
1985	242	61	328	35.10	79.4	2.1	81.5
1986	241	67	334	47.40	80.5	3.2	83.7
1987	**229**	**65**	**334**	**39.70**	**76.5**	**2.6**	**79.1**
				MAUI			
1983	287	85	381	47.50	109.2	4.0	113.2
1984	300	87	362	34.10	108.4	3.0	111.4
1985	290	83	328	34.60	95.1	2.9	98.0
1986	303	88	334	47.00	101.2	4.1	105.3
1987	**300**	**87**	**332**	**39.40**	**99.6**	**3.4**	**103.0**
				OAHU			
1983	161	39	379	47.70	60.8	1.9	62.7
1984	154	40	361	34.10	55.6	1.4	57.0
1985	161	34	330	33.60	53.1	1.1	54.2
1986	170	45	336	47.00	57.1	2.1	59.2
1987	**159**	**39**	**333**	**40.10**	**52.9**	**1.6**	**54.5**

[1] Primary data source, Hawaiian Sugar Planters' Association.

[2] Commercial.

[3] Derived from production and value. State and island prices may not compute exactly due to rounding.

RAW SUGAR PRODUCTION BY ISLAND
STATE OF HAWAII, 1987



U.S. SUGAR INDUSTRY

Sugar is refined from cane and beets grown in the United States. The commercial cultivation of sugarcane had its start in 1751 in Louisiana. The sugar beet industry, on the other hand, is relatively young with commercial production beginning about the middle of the 18th century. Both these industries have grown tremendously since their early beginnings and are produced in the United States in important quantities.

Record sugar production achieved in 1987

Sugar production last year hit a record raw value of 7.29 million tons and moved closer to total U.S. sugar use. Imports, at about 1 million tons, were the lowest this century. However, this reduction in our reliance on sugar imports is not due solely to increased domestic production. The increasing popularity of high fructose corn syrup (HFCS) as a replacement for sugar is responsible for some of the drop in imported sugar.

Hawaii second in domestic cane sugar production

Production of cane sugar totaled 3.33 million tons during 1987, up 2 percent from the previous year. Sugarcane is primarily grown in four states, and among these Hawaii ranks second in production behind Florida. Hawaii's average sugarcane yield of 100 tons per acre, however, is nearly triple that of its closest competitor. The reason for Hawaii's high cane yield is the 18-24 month maturity period of the crop grown here. Florida cane, by contrast, grows for about 12 months while Louisiana cane has a growing period of approximately 9 months.

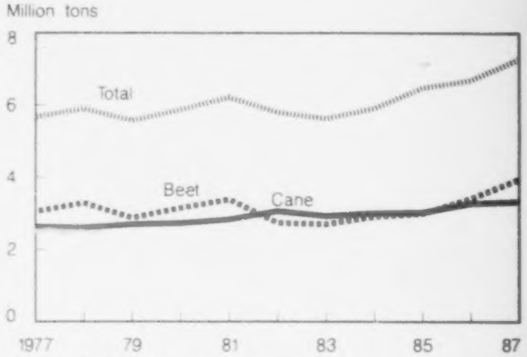
Most domestic sugar comes from beets

Beet sugar is produced in a dozen States located in the Great Plains, North Central, Intermountain and Western regions of the country. California, Idaho, Minnesota and North Dakota are the major beet sugar producing states. Total production of beet sugar is estimated at 3.95 million tons for 1987, up 16 percent from the previous year. Sugar from beets accounted for 54 percent of all sugar production in the United States.

Sugar's future seems assured

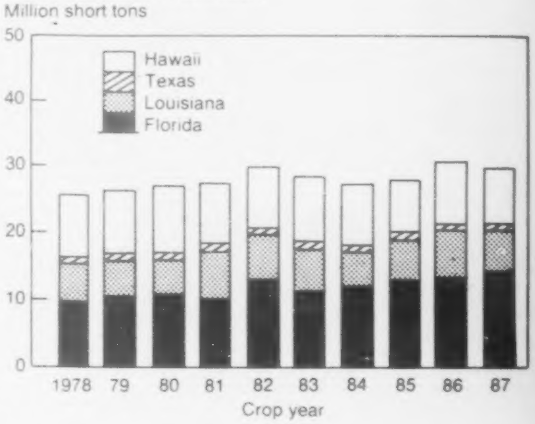
After suffering more than a decade of rapid erosion in its share of the sweetener market to HFCS, artificial sweeteners, and a tarnished health image, sugar now appears to be on steady ground. Sugar's health image was given a big boost by the most recent and comprehensive report issued by the U.S. Food and Drug Administration which concluded that

U.S. Sugar Production

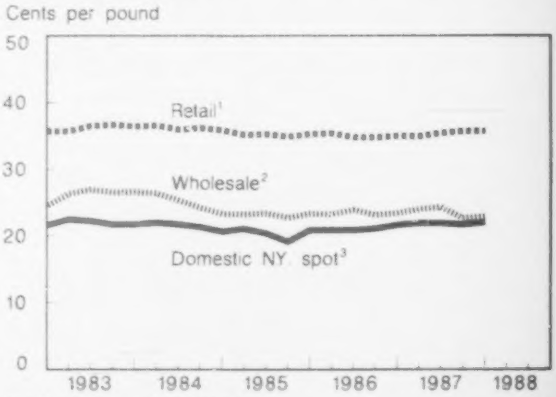


1987 preliminary. Raw value. Cane sugar includes Hawaii.

U.S. Sugarcane Production



U.S. Sugar Prices

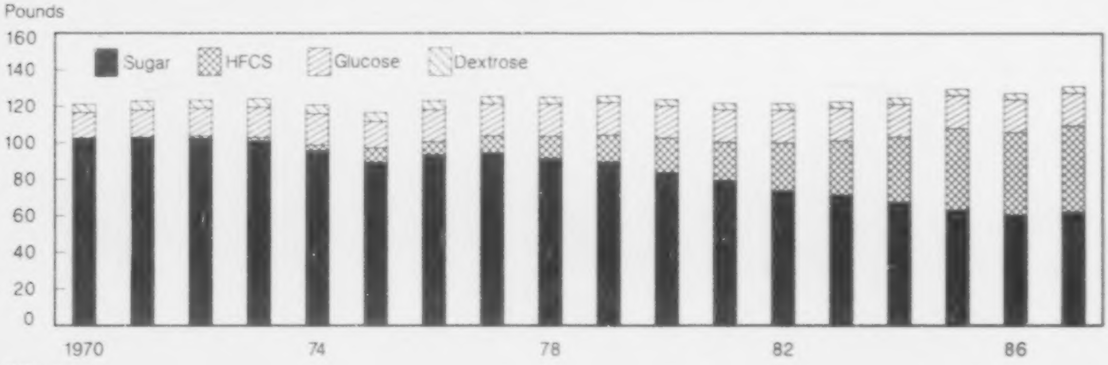


[1] U.S. average [2] Chicago-West
[3] Starting June 1985 prices are for nearby futures

All graphs on pages 24 and 25 are courtesy of the Economic Research Service, USDA.

moderate consumption of sugar is not harmful to humans. Most experts also agree that HFCS, sugar's chief competitor, has made all the significant inroads it can in its present form and future growth will be at a much more modest rate, barring a technological breakthrough. More good news was the recent statistic that per capita consumption of sugar in 1987 showed the first yearly increase since 1977. Furthermore, a recent paper by the Economic Research Service of the U.S. Department of Agriculture forecasts per capita consumption of refined sugar to see a period of gradual increase in the 1990's and that total consumption will reach 8.2 million pounds by 1995.

U.S. Per Capita Sweetener Consumption

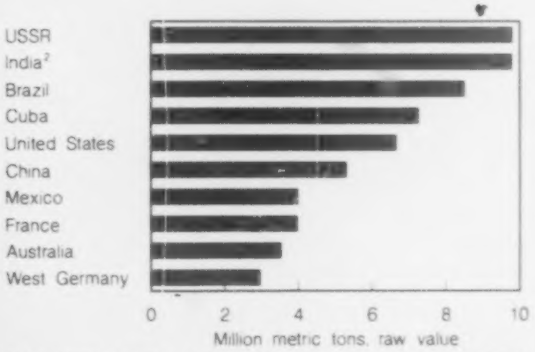


1987 preliminary

WORLD SUGAR

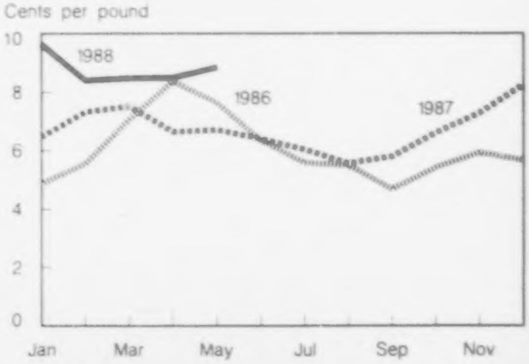
Over 100 million metric tons of sugar are produced each year by about 90 countries worldwide. Governments of many major producing countries heavily subsidize their sugar industries and then dump surplus sugar on the world market at prices below the cost of production making it extremely difficult for efficient producers to compete on an even basis. The U. S. is unique among countries in that it is both a major producer and importer of sugar.

World Centrifugal Sugar Production in 10 Leading Countries, 1987/88[1]



1/ Sept./August crop year. 2/ Includes khandsari (crude form of centrifugal sugar)

World Price for Raw Sugar



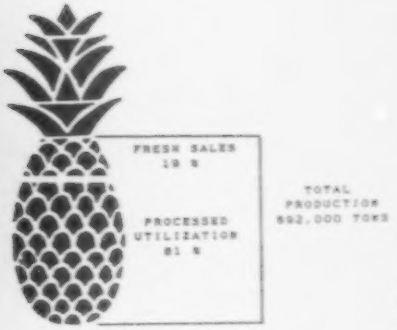
No. 11 f.o.b. Caribbean

PINEAPPLES

PINEAPPLES: Number of farms, acreage, production, disposition, price, and value, State of Hawaii, 1983-87

Year	Farms	Acreage used for crop	Production (fresh weight)	Disposition		Farm price		Value of production (fresh weight)
				Processed (fresh weight)	Fresh market	Processed[1]	Fresh market[2]	
	Number	1,000 acres	1,000 tons	1,000 tons	1,000 tons	Dollars per ton	Dollars per ton	Thousand dollars
1983......	18	36.0	722	602	120	88	395	100,376
1984......	18	35.0	600	481	119	88	400	89,928
1985......	18	34.5	565	441	124	90	410	90,530
1986......	19	36.0	646	514	132	90	405	99,720
1987.....	**19**	**36.1**	**692**	**558**	**134**	**91**	**362**	**99,286**

[1] Estimate to reflect value of fresh fruit delivered processing plant door.
[2] Estimate to reflect value at wholesale establishments for local sales and shipper dock for mainland and foreign sales.



PINEAPPLES: Value of processed production, fresh sales and value, State of Hawaii, 1983-87

Year	Fresh market sales			Processor value of canned fruit and juice production[3]	Total value: Fresh market and processed[4]
	Quantity		Value[2]		
	Local	Shipped out-of-State[1]			
	1,000 tons	1,000 tons	Thousand dollars	Million dollars	Million dollars
1983......	17.7	102.3	47,400	171.6	219.0
1984......	18.0	101.0	47,600	202.0	249.6
1985......	17.5	106.5	50,840	171.7	222.5
1986......	17.3	114.7	53,460	184.9	238.4
1987.....	**17.5**	**116.5**	**48,508**	**202.9**	**251.4**

[1] Market News Service, Hawaii Department of Agriculture. Includes all destinations.
[2] Value FAS shipping point for outshipments, delivered wholesalers local sales.
[3] Value of canned fruit and juices and by-product shipped out-of-State and sold within State.
[4] Pineapple Growers Association of Hawaii.

PINEAPPLES: Outshipments of fresh pineapples, State of Hawaii, 1983-87

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
	1,000 pounds												
1983..........	15,701	13,419	17,251	16,911	19,142	19,506	19,876	19,685	15,415	16,712	16,619	14,300	204,537
1984..........	16,572	18,450	20,535	18,272	20,267	20,301	17,472	15,885	12,423	15,175	14,030	12,562	201,944
1985..........	16,975	15,160	21,017	19,298	18,708	20,534	19,354	19,114	12,155	20,715	14,729	14,968	212,727
1986..........	16,882	18,091	19,400	22,639	24,632	18,348	20,922	17,947	17,213	19,656	17,384	16,231	229,345
1987..........	16,748	17,169	20,946	17,752	23,749	21,347	17,542	24,170	16,746	21,828	17,642	17,344	232,983

Source of outshipment data: Market News Service, Hawaii Department of Agriculture.

FLORICULTURE AND NURSERY PRODUCTS: State of Hawaii, 1983-87

Commodity	Farms having sales[1]					Number sold					Value of sales				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Number										1,000 dollars				
Selected cut flowers:															
(000 dozens)															
Anthuriums	210	205	195	175	167	2,054	2,335	2,305	2,335	1,996	6,035	7,351	7,645	9,878	8,342
Birds of Paradise	37	50	61	46	55	34	51	35	78	58	110	186	213	325	311
Carnations, miniature (000 bunches)[2]	NA	NA	NA	9	11	NA	NA	NA	85	125	NA	NA	NA	179	199
Carnations, standard	10	12	16	12	9	79	91	151	41	430	179	219	326	133	107
Chrysanthemums, pompon (000 bunches)	14	14	14	14	13	448	457	455	353	435	641	690	833	547	697
Chrysanthemums, other	3	1	4	5	5	7	5	5	13	133	27	20	23	76	80
Gingers, red	50	60	65	52	88	68	82	78	85	125	207	267	246	355	560
Gingers, other[3]	NA	NA	NA	19	41	NA	NA	NA	50	62	NA	NA	NA	282	485
Heliconias[4]	NA	NA	34	58	78	NA	NA	31	77	161	NA	NA	125	391	1,427
Proteas (000 stems)	26	30	35	18	37	1,025	1,052	975	983	1,468	435	470	639	656	876
Roses, Sweetheart[5]	NA	NA	NA	6	6	NA	NA	NA	95	671	NA	NA	NA	215	219
Roses, Tea	7	8	10	9	11	561	453	645	548	5,534	1,761	1,556	1,956	1,972	1,946
Other	60	75	71	36	31	NA	NA	NA	NA	NA	511	1,162	1,155	672	820
Orchids:															
Cut: (000 flowers)															
Cattleyas	26	21	25	14	19	56	48	54	31	50	49	41	66	31	56
Cymbidiums	14	17	18	16	19	577	552	530	367	389	173	213	170	165	192
Sprays: (000 dozens)															
Dendrobiums	60	71	74	60	72	123	208	291	314	378	774	1,278	1,687	2,115	2,397
Other[6]	29	29	26	16	16	NA	NA	NA	NA	54	120	145	54	40	54
Potted: (000 pots)															
Dendrobiums	90	84	88	52	86	229	208	201	235	641	1,032	854	1,061	1,169	2,208
Other	65	71	71	49	72	328	375	365	310	1,320	1,588	1,836	2,263	2,161	2,261
Flowers for individual and lei flower use: (Million blooms)															
Carnations	23	20	19	19	18	35.9	33.6	31.0	25.3	26.6	1,304	1,112	1,149	935	967
Vanda, Miss Joaquim	28	28	31	21	27	40.6	25.0	24.0	26.1	22.8	1,226	980	1,015	899	708
Plumerias	18	17	22	19	19	30.5	25.4	21.8	24.4	25.3	460	484	432	422	413
Tuberoses	6	6	8	6	6	27.0	28.0	36.0	38.0	95.5	758	720	1,149	1,075	2,433
Dendrobiums	42	37	44	42	42	7.6	10.5	18.0	18.0	17.9	234	314	458	488	500
Pikake (000 strands)	17	15	20	18	10	124.0	110.0	134.0	182.0	122.4	163	160	220	258	175
Other[3]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	183	151
Foliage:															
Potted:															
Primarily for indoor or patio use[7]	80	85	110	73	102	NA	NA	NA	NA	NA	10,836	10,050	12,019	12,931	14,883
Primarily for landscape use	40	45	45	35	34	NA	NA	NA	NA	NA	845	1,245	1,812	2,215	2,102
Unfinished Stock (for further growing on)	24	20	29	25	24	NA	NA	NA	NA	NA	1,430	1,525	1,845	2,031	1,394
Cut:															
Ti leaves (Million leaves)	60	54	53	37	46	10.6	13.3	12.7	12.7	15.0	375	507	491	534	636
Other greens	33	40	51	36	39	NA	NA	NA	NA	NA	291	355	309	237	191
Potted flowering plants: (000 pots)															
Anthuriums	14	17	18	10	15	142	52	90	76	150	190	125	158	102	229
Chrysanthemums	8	10	13	13	13	218	278	240	289	309	743	957	779	835	966
Poinsettias	25	29	38	29	34	150	139	192	190	219	513	453	618	636	733
Other	35	38	41	37	62	NA	NA	NA	NA	NA	496	404	479	607	813
Ornamentals & trees	42	42	40	34	42	NA	NA	NA	NA	NA	773	915	603	628	2,015
Other nursery products[8]	92	102	74	54	88	NA	NA	NA	NA	NA	1,886	2,311	2,164	2,754	3,221
Total	[9]680	[9]670	[9]675	[9]635	[9]670						36,165	38,905	44,162	49,132	55,767

NA = Not available.

[1] Number for each individual flower or item is count of those having sales of that item during each year.

[2] Prior to 1986, included with "Carnations".

[3] Prior to 1986, included in "All other nursery products".

[4] Prior to 1985, included with "Other".

[5] Prior to 1986, included with "Roses".

[6] Includes vanda hybrids, phalaenopsis, and cypripediums.

[7] Includes hanging baskets.

[8] Includes bedding plants, plant rentals, and other flowers or nursery products not elsewhere classified.

[9] Unduplicated count.

FLORICULTURE AND NURSERY PRODUCTS

FLORICULTURE AND NURSERY PRODUCTS: Hawaii island, 1983-87

Commodity	Number sold					Value of sales				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
						1,000 dollars				
Selected Items:										
Anthuriums, cut (000 dozens)	1,975	2,250	2,185	2,250	1,912	5,766	7,062	7,246	9,552	8,011
Cymbidiums (000 flowers)	570	545	525	363	384	168	206	162	162	188
Foliage, cut	NA	NA	NA	NA	NA	455	580	533	391	509
Foliage, potted (000)	NA	NA	NA	NA	NA	3,380	4,275	5,653	5,740	7,646
Gingers, red (000 dozens)	NA	NA	NA	NA	54	NA	NA	NA	NA	214
Heliconias (000 dozens)	NA	NA	NA	23	52	NA	NA	NA	126	373
Orchids, potted (000)	154	92	147	322	504	688	721	914	1,179	1,955
Ornamentals and trees	NA	NA	NA	NA	NA	30	75	100	236	382
Unfinished stock and cuttings	NA	NA	NA	NA	NA	315	250	370	225	137
Vanda, Miss Joaquim (Million flowers)	39.5	24.0	23.0	25.2	16.0	1,200	950	985	877	459
All other flowers and nursery products[1]	NA	NA	NA	NA	NA	2,314	2,825	3,642	4,309	5,084
Total						14,316	16,944	19,605	22,797	24,958

NA = Not available.

[1] Only selected items are shown separately. All other cut and lei flowers, potted plants, nursery products, plant rentals, etc., for the island are included in the "All other" category.

FLORICULTURE AND NURSERY PRODUCTS: Kauai island, 1983-87

Commodity	Number sold					Value of sales				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
						1,000 dollars				
Selected Items:										
Dendrobium, sprays (000 dozens)	NA	11	6	12	16	[2]	56	53	60	131
Heliconias (000 dozens)	NA	NA	NA	NA	1	NA	NA	NA	NA	6
Ornamentals and trees	NA	NA	NA	NA	NA	NA	NA	NA	NA	20
All other flowers and nursery products[1]	NA	NA	NA	NA	NA	421	732	1,126	1,086	1,115
Total						421	788	1,179	1,146	1,272

NA = Not available.

[1] Only selected items are shown separately. All other cut and lei flowers, potted plants, nursery products, plant rentals, etc., for the island are included in the "All other" category.

[2] Included in the "All other" category.

FLORICULTURE AND NURSERY PRODUCTS: Maui/Molokai islands, 1983-87

Commodity	Number sold					Value of sales				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
						1,000 dollars				
Selected Items:										
Carnation, heads (Million flowers)	34.0	32.0	29.0	21.7	22.1	1,250	1,065	1,060	817	840
Chrysanthemums, pompon (000 bunches)	56	42	46	36	45	61	50	80	68	90
Foliage, cut	NA	NA	NA	NA	NA	NA	NA	NA	88	107
Foliage, potted (000)	NA	NA	NA	NA	NA	620	650	615	318	307
Gingers, other	NA	NA	NA	41	45	NA	NA	NA	245	400
Heliconias (000 dozens)	NA	NA	NA	30	58	NA	NA	NA	159	490
Ornamentals and trees	NA	NA	NA	NA	NA	NA	NA	NA	NA	79
Proteas (000 stems)	960	972	747	932	1,019	400	437	564	545	723
All other flowers and nursery products[1]	NA	NA	NA	NA	NA	2,158	2,344	2,869	3,004	3,534
Total						4,489	4,546	5,188	5,244	6,570

NA = Not available.

[1] Only selected items are shown separately. All other cut and lei flowers, potted plants, nursery products, plant rentals, etc., for the island are included in the "All other" category.

FLORICULTURE AND NURSERY PRODUCTS: Oahu island, 1983-87

Commodity	Number sold					Value of sales				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
						1,000 dollars				
Selected Items:										
Anthuriums, cut (000 dozens)	75	80	80	81	77	261	276	280	316	304
Cattleyas (000 flowers)	45	41	46	28	39	40	37	56	28	41
Chrysanthemums, pompon (000 bunches)	295	315	287	218	299	400	440	503	283	416
Chrysanthemums, potted (000)	73	81	92	92	72	235	265	294	218	215
Dendrobium, sprays (000 dozens)	90	162	215	196	244	590	1,001	1,115	1,375	1,072
Dendrobiums, for lei (Million flowers)	6.5	6.5	10.4	11.0	10.9	196	190	253	305	321
Foliage, cut	NA	NA	NA	NA	NA	195	270	258	242	210
Foliage, potted (000)	NA	NA	NA	NA	NA	6,800	5,100	5,731	6,615	6,811
Gingers, red (000 dozens)	48	53	50	54	56	145	178	135	221	263
Gingers, other	NA	NA	NA	5	8	7	6	10	20	37
Heliconias (000 dozens)	NA	NA	NA	24	50	NA	NA	NA	105	558
Orchids, potted (000)	368	473	368	410	1,394	1,711	1,838	2,174	2,214	2,280
Pikake (000 strands)	120	110	105	112	65	159	160	157	154	98
Plumerias (Million flowers)	10.7	9.4	7.7	8.4	8.7	155	154	148	148	144
Poinsettias, potted (000)	109	95	134	130	151	354	277	434	413	492
Unfinished stock and cuttings	NA	NA	NA	NA	NA	770	1,020	655	905	646
All other flowers and nursery products[1]	NA	NA	NA	NA	NA	4,921	5,415	5,987	6,383	9,059
Total						16,939	16,627	18,190	19,945	22,967

NA = Not available.

[1] **Only selected items are shown separately.** All other cut and lei flowers, potted plants, nursery products, plant rentals, etc., for the island are included in the "All other" category.

FLORICULTURE AND NURSERY PRODUCTS: Area used for production, State of Hawaii, 1987

Commodity	Plants	Production Area	
		1987	Intentions for 1988
	Thousand	1,000 square feet	
Cut flowers:			
Anthuriums	NA	18,640	18,850
		Acres	
Birds of Paradise	NA	52	60
		1,000 square feet	
Carnations, standard	285	145	151
Carnations, miniature	188	125	156
Chrysanthemums, standard	102	92	127
Chrysanthemums, pompon	1,479	546	551
		Acres	
Gingers, red	NA	86	92
Gingers, other	NA	31	38
Heliconias	NA	115	140
		1,000 square feet	
Roses, Hybrid Tea	318	855	855
Roses, Sweetheart	65	155	155
		Acres	
Proteas	NA	116	140
		1,000 square feet	
Orchids:			
Cattleyas	NA	67	57
Cymbidiums	NA	542	506
Dendrobiums	NA	3,119	3,789
Other potted	NA	742	699
Foliage:			
Potted (indoor use)	NA	7,824	8,205
Potted flowering:			
Chrysanthemums	NA	272	NA
Poinsettias	NA	449	NA

NA = Not available.

FLORICULTURE AND NURSERY PRODUCTS

FLORICULTURE AND NURSERY PRODUCTS: Number of farms and growing area, by islands, 1983-87

Year	Hawaii	Kauai	Maui/Molokai	Oahu	State
			NUMBER OF FARMS – Unduplicated		
1983	320	25	85	250	680
1984	315	25	80	250	670
1985	310	30	85	250	675
1986	300	25	75	235	635
1987	**320**	**30**	**90**	**230**	**670**
			GREENHOUSE – 1,000 square feet[1]		
1983	1,164	15	193	955	2,327
1984	1,195	13	276	930	2,414
1985	1,439	12	307	1,078	2,836
1986	1,360	5	240	930	2,535
1987	**1,710**	**25**	**340**	**1,070**	**3,145**
			ARTIFICIAL SHADE STRUCTURE -- 1,00 square feet		
1983	19,252	103	958	6,016	26,329
1984	19,264	178	905	6,470	26,817
1985	19,087	244	1,286	9,026	29,643
1986	19,330	270	900	7,110	27,610
1987	**19,820**	**260**	**760**	**7,130**	**27,970**
			NATURAL SHADE AREA -- Acres		
1983	98	3	--	5	106
1984	83	4	--	5	92
1985	82	5	--	4	91
1986	70	--	--	--	70
1987	**55**	**--**	**--**	**--**	**55**
			OPEN FIELD -- Acres		
1983	420	24	248	330	1,022
1984	446	30	250	233	959
1985	413	26	259	226	924
1986	420	25	180	280	905
1987	**450**	**40**	**270**	**320**	**1,080**
			TOTAL AREA – Acres		
1983	987	30	274	495	1,786
1984	994	38	277	406	1,715
1985	966	37	296	462	1,761
1986	965	31	206	465	1,667
1987	**999**	**47**	**295**	**508**	**1,849**

-- = Less than 1/2 acre.

[1] Glass or glass substitute structure.

FLORICULTURE AND NURSERY PRODUCTS

FLORICULTURE AND NURSERY PRODUCTS: Out-of-State sales, State of Hawaii, 1983-87

Commodity	1983	1984	1985	1986	1987
	1,000 dollars[1]				
Anthuriums, cut	7,005	7,050	7,581	8,653	9,170
Birds of Paradise	[2]	[2]	175	415	425
Cattleyas	120	115	232	456	163
Cymbidiums	125	121	155	108	136
Dendrobium, sprays	439	846	1,031	1,444	1,840
Foliage, cut	460	670	550	858	1,010
Foliage, potted	9,070	8,650	9,550	9,782	8,935
Gingers, red	145	240	270	565	705
Gingers, other	[2]	[2]	[2]	265	365
Heliconias	[2]	[2]	150	735	1,270
Orchids, potted	1,531	1,510	1,930	1,839	3.240
Proteas	505	550	560	704	1,003
Unfinished potted foliage stock	1,360	750	1,160	740	575
All other flowers and nursery products	1,240	1,108	940	1,572	3,067
Total	22,000	21,610	24,284	28,136	31,904

[1] Based on F.O.B. island value. Includes both wholesale and retail sales. Does not include sales of cut flowers, leis, etc., purchased within the State and hand carried out.

[2] Not shown separately.

ANTHURIUMS

ANTHURIUMS: Mainland and foreign shipments from the Island of Hawaii, 1983-87

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
	1,000 dozens												
Mainland:													
1983	59.7	73.9	48.5	54.1	54.3	52.3	52.1	56.0	59.1	58.8	64.1	87.4	720.3
1984	67.0	92.6	61.8	67.6	76.4	74.8	59.2	65.9	60.9	66.4	75.9	97.9	866.4
1985	70.1	93.0	62.9	66.9	81.6	65.7	71.0	80.0	79.0	80.0	84.0	118.0	952.2
1986	83.0	105.0	80.0	91.0	101.0	84.0	84.0	89.0	95.0	89.0	85.5	110.0	1,096.5
1987	84.0	101.8	81.0	86.9	88.8	79.7	98.4	81.2	85.0	77.0	77.0	94.9	1,035.7
Foreign:													
1983	66.0	53.5	63.3	64.4	56.2	79.7	87.3	98.1	107.8	128.7	101.7	93.1	999.8
1984	55.9	53.5	62.3	74.1	79.1	77.7	67.3	101.0	85.4	113.6	67.6	57.5	895.0
1985	31.0	28.4	29.7	30.6	53.7	51.7	74.1	82.5	74.0	94.2	57.2	51.9	659.0
1986	36.1	18.9	29.9	41.0	62.3	62.9	89.2	100.1	82.9	99.3	59.9	52.0	734.5
1987	23.4	15.5	22.8	34.9	41.0	54.5	76.7	54.3	52.3	53.5	34.3	32.3	495.5
Total shipments:[1]													
1983	125.7	127.5	111.8	118.4	110.5	132.0	139.4	154.1	166.9	187.5	165.8	180.5	1,720.1
1984	122.9	146.1	124.1	141.7	155.5	152.5	126.5	166.9	146.3	180.0	143.5	155.4	1,761.4
1985	101.1	121.4	92.6	97.5	135.3	117.4	145.1	162.5	153.0	174.2	141.2	169.9	1,611.2
1986	119.1	123.9	109.9	132.0	163.3	146.9	173.2	189.1	177.9	188.3	145.4	162.0	1,831.0
1987	107.4	117.3	103.8	121.8	129.8	134.2	175.1	135.5	137.3	130.5	111.3	127.2	1,531.2

[1] Sum of mainland and foreign may not add to total shipments due to rounding.

ANTHURIUMS

ANTHURIUMS: Mainland shipments, percent of flowers sold by size, Hawaii island 1983-87

Year	Miniature	Small	Medium	Large	Extra-large
1983	19	26	32	20	3
1984	23	25	30	19	3
1985	21	23	31	21	4
1986	21	24	30	20	5
1987	19	25	30	20	6

ANTHURIUMS: Foreign shipments, by destination, Hawaii island, 1983-87

Destination	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct	Nov.	Dec.	Total
	1,000 dozens												
Australia:													
1983	1.9	3.4	4.1	3.6	1.7	2.7	3.1	2.6	2.6	1.9	2.4	2.6	32.6
1984	1.2	3.2	2.7	3.4	5.3	2.8	3.5	3.5	3.0	2.9	2.8	2.6	36.9
1985	.9	1.5	.6	.7	1.7	.2	.6	.2	.1	--	–	–	6.5
1986-87[1]													
Hong Kong:													
1983	1.3	1.2	1.6	1.0	1.2	.9	.7	.8	.6	.5	.7	.3	10.8
1984	1.6	.7	2.2	.7	.8	.7	1.0	.7	.7	.9	.8	.8	11.6
1985	.7	1.3	.8	.8	1.0	.9	1.2	1.1	2.1	1.4	1.2	1.6	14.1
1986	2.4	1.4	1.2	1.6	1.5	1.6	2.0	1.5	2.0	1.8	1.4	1.5	19.9
1987	2.3	1.2	1.5	1.0	1.2	1.5	1.4	1.3	2.3	1.1	.8	.6	16.2
Italy:													
1983	26.4	28.7	30.4	29.7	18.0	33.5	22.4	32.8	39.9	57.9	32.5	32.2	384.4
1984	26.5	28.6	27.2	33.4	27.3	23.0	16.9	34.2	32.3	59.7	25.8	26.0	360.9
1985	15.9	12.3	13.8	10.3	16.1	12.3	11.6	15.9	18.3	42.7	13.6	15.3	198.1
1986	15.3	8.1	14.4	12.4	14.1	12.5	15.3	16.1	21.2	45.1	13.2	15.2	202.9
1987	11.1	6.4	8.8	14.5	11.7	10.1	12.4	11.1	10.4	21.3	8.0	7.9	133.7
Japan:													
1983	16.8	3.2	6.8	13.7	22.8	33.4	56.3	55.1	56.0	54.5	48.9	40.1	407.6
1984	13.6	4.5	20.2	25.4	34.6	44.5	43.0	56.8	41.4	40.6	29.8	18.0	372.4
1985	6.1	3.5	8.9	15.1	26.9	35.1	58.3	62.5	47.7	45.8	37.8	29.3	377.0
1986	10.9	6.1	12.1	23.2	44.0	47.1	70.9	81.0	56.4	48.4	43.0	32.5	475.6
1987	9.3	5.3	12.0	18.1	27.5	42.1	61.9	40.6	37.1	28.5	23.2	21.9	327.5
Switzerland:													
1983	10.1	12.4	14.2	10.5	7.9	5.6	1.2	4.6	5.9	6.8	9.6	9.3	98.1
1984	7.4	12.8	7.6	8.8	8.3	5.1	.6	3.6	5.7	7.9	6.2	8.1	82.1
1985	5.2	7.0	3.4	1.7	5.2	1.3	.4	.6	3.4	1.3	1.8	3.1	34.4
1986	.7	.9	.6	3.1	1.8	1.1	.7	1.1	2.8	2.7	1.5	1.5	18.5
1987	.2	2.3	.5	1.3	.5	.5	.6	.4	2.1	2.1	1.6	1.0	13.1
All other:													
1983	9.5	4.6	6.2	5.9	4.6	3.6	3.6	2.2	2.8	7.1	7.6	8.6	66.3
1984	5.6	3.7	2.4	2.4	2.8	1.6	2.3	2.2	2.3	1.6	2.2	2.0	31.1
1985	2.2	2.8	2.2	2.0	2.8	1.9	2.0	2.2	2.4	3.0	2.8	2.6	28.9
1986	6.8	2.4	1.6	.7	.9	.6	.3	.4	.5	1.3	.8	1.3	17.6
1987	.5	.3	*	*	.1	.3	.4	.9	.4	.5	.7	.9	5.0

– = Negligible.

[1] Included in "All other" category.

ANTHURIUMS

ANTHURIUMS: Area used for production, by counties, 1985-87

Year	Hawaii	Kauai	Maui	Honolulu	State
	1,000 square feet				
	ARTIFICIAL SHADE STRUCTURE[1]				
1985	15,750	25	6	415	16,196
1986	15,750	27	2	365	16,144
1987	**15,730**	[2]	[2]	**330**	**16,160**
	NATURAL SHADE AREA				
1985	3,400	26	13	--	3,439
1986	3,000	10	4	--	3,014
1987	**2,470**	[2]	[2]	[2]	**2,480**
	TOTAL ARTIFICIAL AND NATURAL SHADE				
1985	19,150	51	19	415	19,635
1986	18,750	37	6	365	19,158
1987	**18,200**	[2]	[2]	**330**	**18,640**

-- = Less than 500 square feet.

[1] Includes saran and rigid type greenhouses.

[2] Included in State total to avoid disclosure of individual operations.

DENDROBIUMS

DENDROBIUM ORCHIDS: Sales and value, 1983-87

Year	Individual blossoms		Cut sprays		Potted plants				Total value[1]
					In bud/bloom		Community pots		
	Number sold	Value	Number sold	Value	Number sold	Value	Number sold	Value	
	Million blooms	1,000 dollars	1,000 dozens	1,000 dollars	1,000 pots	1,000 dollars	1,000 pots	1,000 dollars	1,000 dollars
					STATE[2]				
1983	7.6	234	123	774	201	873	28	159	2,040
1984	10.5	314	208	1,278	185	709	23	145	2,446
1985	18.0	458	291	1,687	146	802	55	259	3,206
1986	18.0	488	314	2,115	235	982	30	187	4,051
1987	**17.9**	**500**	**378**	**2,397**	**610**	**2,037**	**31**	**171**	**5,105**
					OAHU				
1983	6.5	196	90	590	120	465	26	147	1,398
1984	6.5	190	162	1,001	136	476	22	132	1,799
1985	10.4	253	215	1,115	100	492	52	242	2,102
1986	11.0	305	196	1,375	106	505	29	181	2,644
1987	**10.9**	**321**	**187**	**1,247**	**216**	**915**	**28**	**157**	**2,640**

[1] Total value for 1986 includes value of liners not shown separately.

[2] Hawaii, Kauai, and Maui combined in State total to avoid disclosure of individual operations.

DENDROBIUMS

DENDROBIUM ORCHIDS: Percent of cut sprays sold by quarter, 1983-87

Year	January - March	April - June	July - September	October - December
			Percent	
1983	11	24	32	33
1984	11	33	32	24
1985	12	24	35	29
1986	14	30	33	23
1987	14	25	37	24

DENDROBIUM ORCHIDS: Out-of-State sales, 1983-87

Year	Cut sprays		Potted plants[1]		Total value
	Number	Value	Number	Value	
	Dozens	Dollars	Pots	Dollars	Dollars
1983	59,000	439,000	80,700	431,000	870,000
1984	120,000	846,000	85,100	459,000	1,305,000
1985	152,000	1,031,000	107,000	645,000	1,676,000
1986	214,000	1,444,000	159,000	653,000	2,097,000
1987	**244,000**	**1,840,000**	**469,000**	**2,040,000**	**3,880,000**

[1] Includes community pots.

DENDROBIUM ORCHIDS: Production area, 1987 with 1988 intentions[1]

Type of shade	Used in 1987			Intentions for 1988			
	Cut sprays, blossoms	Potted plants	Total	Cut sprays, blossoms	Potted plants	Total	Percent of 1987
				1,000 square feet			
				STATE[2]			
Glass or glass substitute	225	230	455				
Saran	1,970	420	2,390				
Natural shade and open field	110	20	130				
Total	2,305	670	2,975	2,890	900	3,790	127
				OAHU			
Glass or glass substitute	100	60	160				
Saran	1,290	375	1,665				
Natural shade and open field	18	22	40				
Total	1,408	457	1,865				

[1] Total area devoted to crop. May include area not yet producing.

[2] Hawaii, Kauai, and Maui combined in State total to avoid disclosure of individual operations.

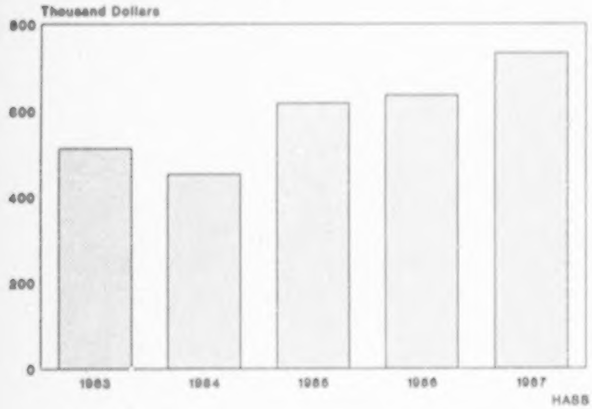
POINSETTIAS

POINSETTIAS: Number of growers, pots sold by size, and value, 1983-87

Year	Growers	Pots sold by size				Value
		Under 5 inches	5-6 1/2 inches	All other sizes[1]	Total	
	Number					Dollars
	STATE					
1983	25	21,000	120,000	9,000	150,000	513,000
1984	29	26,000	107,000	6,000	139,000	453,000
1985	38	27,000	151,000	14,000	192,000	618,000
1986	29	44,000	131,000	15,000	190,000	636,000
1987	**34**	**44,000**	**162,000**	**13,000**	**219,000**	**733,000**

[1] Includes hanging baskets.

POINSETTIAS: Value of Sales,
State of Hawaii, 1983-87



POINSETTIAS: Percent of flowers grown by type of growing area, 1983-87

Year	Saran	Glass or glass substitute	Open field
1983	23	44	33
1984	26	40	34
1985	20	39	41
1986	23	39	38
1987	**24**	**45**	**31**

POINSETTIAS: Percent of flowers grown by varieties, 1983-87

Year	C-1	V-10	V-14	Others
1983	22	48	12	18
1984	16	54	20	10
1985	15	59	16	10
1986	19	59	11	11
1987	23	60	6	11

POINSETTIAS: 1987 intentions, with comparisons

Year	Grower intentions spring of year	Pots set[1]	Pots sold
	Number		
1983	176,000	205,000	150,000
1984	NA	210,000	139,000
1985	NA	231,000	192,000
1986	NA	225,000	190,000
1987	**NA**	**233,000**	**219,000**

NA = Not available.
[1] Includes small pots eventually used for hanging baskets and counted as only one pot.

GINGER ROOT

GINGER ROOT: Acreage, yield, production, price, and value, State of Hawaii, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
1983	160	32.1	5,140	54.6	2,806
1984	135	37.4	5,050	45.1	2,280
1985	125	43.4	5,425	82.3	4,465
1986	145	40.7	5,900	81.0	4,779
1987	**215**	**46.7**	**10,050**	**45.0**	**4,523**

GINGER ROOT: U. S. imports by product type, 1983-87

Product form	1983	1984	1985	1986	1987
	1,000 pounds				
Unground	7,855	9,189	12,344	11,541	**10,243**
Candied, glace, etc.	2,465	633	644	441	**527**
Ground, not candied	168	73	57	64	**494**
Total	**10,488**	**9,895**	**13,045**	**12,046**	**11,264**

Source: Economic Research Service, U. S. Department of Agriculture.

FEED CROPS

FEED CROPS: Acreage, production and value, State of Hawaii, 1983-87[1]

Year	Acreage harvested	Production	Value[2]
	Acres	1,000 tons	1,000 dollars
1983	9,347	45.7	2,107
1984	8,993	20.9	912
1985	5,542	30.6	3,028
1986	2,317	16.0	1,155
1987	**2,767**	**9.5**	**887**

[1] Includes grains, grass and legume crops, and pineapple green chop.
[2] Includes value of production used on farm where produced.

SEED CORN

SEED CORN: Number of farms, acreage used for crop, acreage harvested, outshipments, and value, State of Hawaii, 1983-87

Crop year November-June	Farms	Acreage used for crop	Acreage harvested			Outshipments of seed	Value
			Nursery	Observation	Seed increase		
	Number	Acres	Acres	Acres	Acres	1,000 pounds	1,000 dollars
1983-84	6	730	340	90	300	560	4,170
1984-85	7	870	395	145	330	500	5,150
1985-86	7	840	430	160	250	620	5,170
1986-87	7	800	420	125	255	535	5,070
1987-88	**7**	**800**	**425**	**90**	**285**	**540**	**5,020**

AVOCADOS

AVOCADOS: Number of farms, acreage, yield, production, price, and value, State of Hawaii, 1983-87

Year	Farms	Acreage[1]		Yield per acre (bearing)	Production	Farm price	Value of sales
		In crop	Bearing				
	Number	Acres	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
1983	160	450	250	4.7	1,170	26.1	305
1984	165	505	270	4.3	1,150	25.9	298
1985	160	525	320	3.8	1,220	24.5	299
1986	160	540	330	3.9	1,300	25.6	333
1987	**145**	**500**	**300**	**3.0**	**900**	**31.5**	**284**

[1] At end of year.

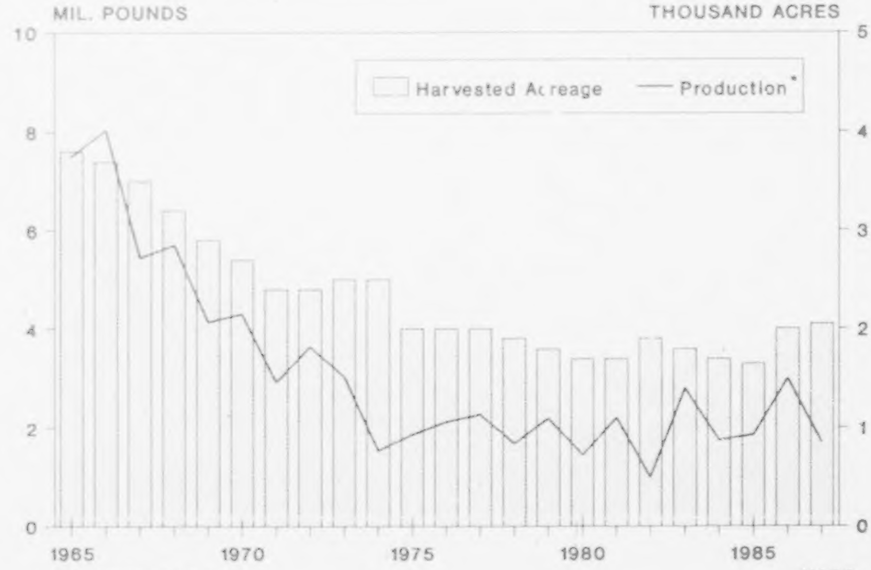
COFFEE

COFFEE: Number of farms, acreage, yield, marketings, price, and value, State of Hawaii, 1983-87

Year[1]	Farms	Acreage		Marketings - parchment equivalent				Green production
		In crop	Harvested	Yield per harvested acre	Marketings	Farm price	Value of sales	
	Number	Acres	Acres	1,000 pounds	1,000 pounds	Dollars per pound	1,000 dollars	1,000 pounds
1983-84	610	2,000	1,800	1.6	2,800	2.25	6,300	NA
1984-85	615	2,000	1,700	1.0	1,750	2.75	4,813	NA
1985-86	620	2,100	1,650	1.1	1,850	2.80	5,180	1,535
1986-87	620	2,300	2,000	1.5	3,000	2.90	8,700	2,400
1987-88 ...	**630**	**2,300**	**2,050**	**0.8**	**1,700**	**2.85**	**4,845**	**1,370**

[1] Harvesting normally begins in September and extends to the early part of the following year.

COFFEE: Acreage and Production,
State of Hawaii, 1965-87



• Parchment basis.

HASS

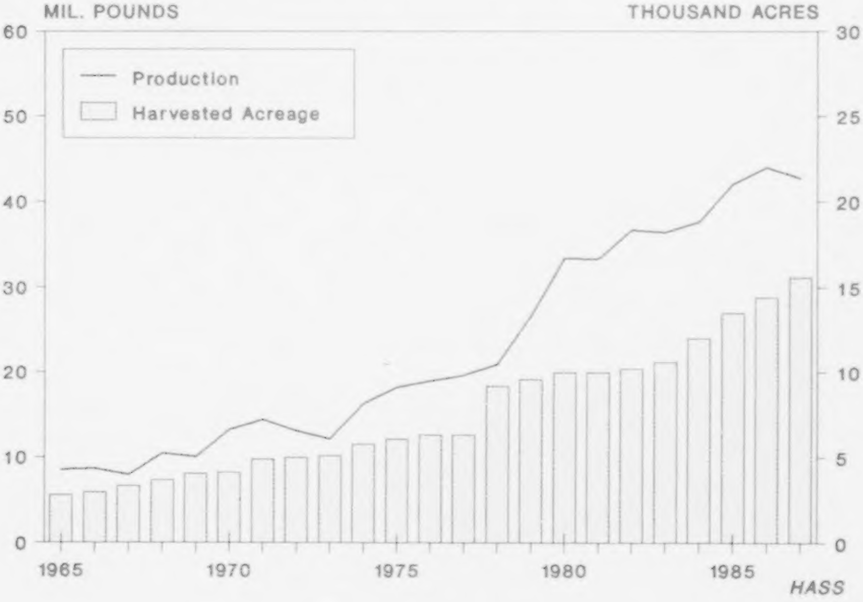
MACADAMIA NUTS

MACADAMIA NUTS: Number of farms, acreage, yield, production, marketings, farm prices and value, 1983-87 seasons, State of Hawaii

Crop year[1]	Farms	Acreage		Yield per acre[2]	Production[3]		Average moisture		Farm prices[3]		Farm value[7]
		In crop	Bearing		Gross[4]	Net[5]	Entire crop	Purchases only	Gross[6]	Net	
	Number	Acres	Acres	1,000 pounds	1,000 pounds	1,000 pounds	Percent	Percent	Cents per pound	Cents per pound	1,000 dollars
1983-84	600	16,400	10,600	3.4	38,500	36,420	18.3	18.6	62.2	65.7	23,928
1984-85	605	17,500	12,000	3.1	40,500	37,700	19.2	19.7	64.4	69.2	26,088
1985-86	610	20,900	13,500	3.1	44,700	42,000	19.7	21.5	68.1	72.5	30,450
1986-87	645	21,200	14,400	3.1	46,600	44,000	20.3	20.7	75.5	80.0	35,200
1987-88	**650**	**21,500**	**15,600**	**2.7**	**45,600**	**42,700**	**19.0**	**20.3**	**78.7**	**84.0**	**35,868**

[1] Season begins July 1st and ends June 30th of following year.
[2] Net production per bearing acre.
[3] Wet in-shell basis.
[4] Gross pounds delivered for processing.
[5] Gross pounds delivered for processing less total spoilage through cracking, but before roasting.
[6] Farm value divided by gross production.
[7] Net production multiplied by net farm price.

MACADAMIA NUTS: Acreage and Production, State of Hawaii, 1965-87



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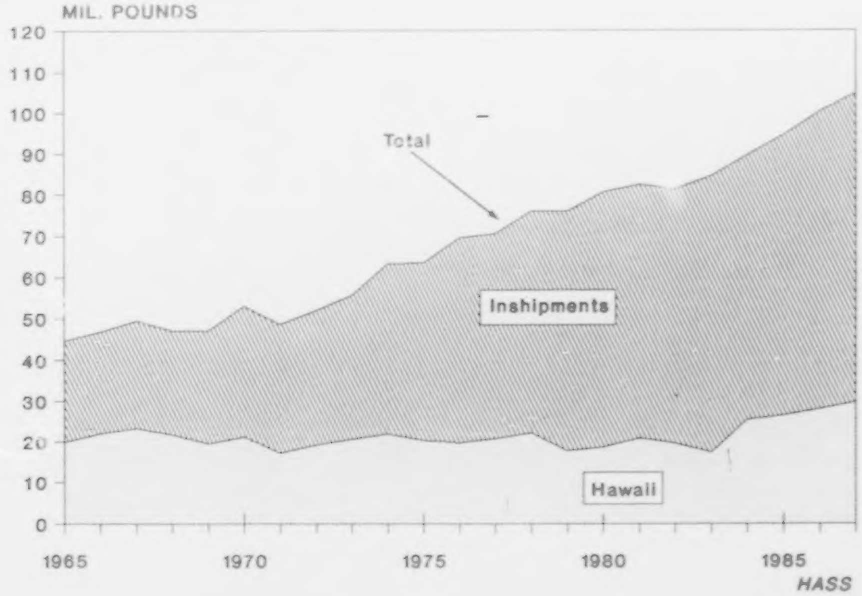
MARKET SUPPLY: Fresh market fruits, State of Hawaii, 1983-87[1]

Commodity		1983	1984	1985	1986	1987	Hawaii market share 1987
		1,000 pounds					Percent
Apples:	Inshipments	13,123	12,997	12,463	13,282	**14,269**	
Avocados:	Inshipments	634	820	726	576	**1,091**	
	Hawaii	1,170	1,150	1,220	1,300	**900**	**45**
Bananas:	Inshipments	10,027	6,472	10,862	10,887	**10,607**	
	Hawaii	4,470	8,900	8,160	9,700	**11,400**	**52**
Grapefruit:	Inshipments	2,971	2,461	2,331	2,335	**2,559**	
Grapes:	Inshipments	5,516	6,096	6,707	7,366	**7,474**	
Lemons:	Inshipments	3,046	3,459	3,268	3,407	**3,619**	
Nectarines:	Inshipments	1,830	2,044	2,218	1,891	**2,322**	
Oranges:	Inshipments	18,013	17,413	17,593	19,347	**17,570**	
	Hawaii	590	640	340	450	[2]	
Papayas:	Hawaii[3]	10,660	14,190	16,200	16,075	**15,910**	**100**
Pears:	Inshipments	3,657	4,053	4,050	4,186	**4,404**	
Tangerines:	Inshipments	1,519	633	465	423	**476**	
	Hawaii	70	100	50	75	**70**	**13**
All other fruits:	Inshipments	5,135	6,558	6,009	5,926	**7,191**	
	Hawaii	310	350	460	400	**1,345**	**16**
Unspecified fruits:	Inshipments[4]	1,805	1,312	1,391	2,627	**3,557**	
Total:	Inshipments	67,276	64,318	68,083	72,253	**75,139**	
	Hawaii	17,270	25,330	26,430	28,000	**29,625**	**28**
	All	84,546	89,648	94,513	100,253	**104,764**	

[1] Excludes pineapples, guavas, papayas, and passion fruit used for processing, and quantities shipped out-of-State. [2] Data not shown separately to avoid disclosure of individual operations but combined and included with all other fruits. [3] Fresh intrastate sales only. Excludes mainland and foreign fresh sales. [4] Proration of shipments of unspecified mixed fruits destined for outlying islands.

Source of inshipment data: Market News Service, Hawaii Department of Agriculture.

MARKET SUPPLY: Fresh Market Fruits, State of Hawaii, 1965-87



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ORANGES

ORANGES: Number of farms, acreage, yield, production, price, and value, State of Hawaii, 1983-87

Year	Farms	Acreage bearing[1]	Yield per acre	Production	Farm price	Value of sales
	Number	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
1983	15	105	5.6	590	20.8	123
1984	15	110	5.8	640	26.6	170
1985	11	100	3.4	340	25.5	87
1986	12	100	4.5	450	25.4	114
1987[2]						

[1] At end of year.

[2] Data not shown separately to avoid disclosure of individual operations but combined and included in fruits (excluding pineapples).

PASSION FRUIT

PASSION FRUIT: Number of farms, acreage, quantity processed, price, and value, State of Hawaii, 1983-87

Year	Farms	Cultivated acreage[1]		Quantity processed[2]	Average price	Value of sales[2]
		In crop	Bearing			
	Number	Acres	Acres	1,000 pounds	Cents per pound	1,000 dollars
1983	17	80	35	1,780	10.1	180
1984	21	100	40	785	12.1	95
1985	19	60	25	820	12.3	101
1986	11	45	35	550	12.3	68
1987	19	30	20	560	12.0	67

[1] At end of year.

[2] Includes wild and cultivated production.

TANGERINES

TANGERINES: Number of farms, acreage, yield, production, price, and value, State of Hawaii, 1983-87

Year	Farms	Acreage bearing[1]	Yield per acre	Production	Farm price	Value of sales
	Number	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
1983	12	20	3.5	70	29.3	21
1984	13	22	4.5	100	26.2	26
1985	9	15	3.3	50	35.1	18
1986	13	15	5.0	75	36.3	27
1987	11	15	4.7	70	32.5	23

[1] At end of year.

GUAVAS: Total processed, farm production, number of farms, acreage, price, and value, State of Hawaii, 1983-87

Year	Total delivered to processors[1]			Farm production					
	Quantity processed	Average price	Value of sales	Farms	Acreage in crop	Acreage harvested	Production	Farm price	Value of sales
	1,000 pounds	Cents per pound	1,000 dollars	Number	Acres	Acres	1,000 pounds	Cents per pound	1,000 dollars
					STATE				
1983 ...	8,850	8.9	788	117	965	730	7,700	8.8	678
1984 ...	7,000	9.8	686	107	875	610	6,740	9.8	661
1985 ...	9,530	10.2	972	100	920	680	8,890	10.2	907
1986 ...	17,130	10.5	1,799	100	990	690	16,560	10.5	1,739
1987 ...	**18,050**	**12.0**	**2,166**	**110**	**[2]1,070**	**710**	**17,450**	**12.0**	**2,094**
					HAWAII				
1983 ...	3,270	8.4	275	103	460	280	3,250	8.4	273
1984 ...	3,630	9.8	356	95	370	250	3,610	9.8	354
1985 ...	3,170	10.0	317	91	330	200	3,050	10.0	305
1986 ...	5,210	10.5	547	90	340	210	5,130	10.5	539
1987 ...	**5,450**	**12.0**	**654**	**98**	**[2]420**	**210**	**5,260**	**12.0**	**631**
					KAUAI/MAUI/MOLOKAI/OAHU[3]				
1983 ...	5,580	9.2	513	14	505	450	4,450	9.1	405
1984 ...	3,370	9.8	330	12	505	360	3,130	9.8	307
1985 ...	6,360	10.3	655	9	590	480	5,840	10.3	602
1986 ...	11,920	10.5	1,252	10	650	480	11,430	10.5	1,200
1987 ...	**12,600**	**12.0**	**1,512**	**12**	**[2]650**	**500**	**12,190**	**12.0**	**1,463**

[1] Fruit allocated to island of production not island where processed. Includes wild and cultivated production.
[2] Includes planting intentions.
[3] Kauai, Maui, Molokai and Oahu are combined to avoid disclosure of individual operations.

GUAVAS: Quantity, price, and value, State of Hawaii, 1983-87

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual Total[1]	Average price[2]	Value
	1,000 pounds													Cents per lb.	1,000 dollars
1983.....	260	180	135	170	105	70	825	1,135	1,450	2,270	1,530	720	8,850	8.9	788
1984.....	325	355	345	365	530	570	780	1,165	775	645	595	550	7,000	9.8	686
1985.....	345	235	155	320	490	425	480	1,040	1,840	1,255	1,840	1,105	9,530	10.2	972
1986.....	1,345	945	450	360	690	525	570	1,865	4,855	3,695	1,070	760	17,130	10.5	1,799
1987.....	313	409	422	228	392	1,006	1,750	1,904	3,323	4,484	2,509	1,310	18,050	12.0	2,166

[1] Sum of monthly estimates may not add to annual total due to rounding.
[2] Equivalent F.O.B. plant, island of production. Prices for guavas are averages for wild and cultivated fruit.

GUAVAS: U. S. imports by product type, 1983-87

Product form	1983	1984	1985	1986	1987
	1,000 pounds				
Paste and pulp	7,330	7,974	8,452	13,876	9,553
Prepared, preserved, not specifically provided for	1,371	1,329	1,138	1,612	2,551
Jam and jelly	789	891	1,373	767	1,041
Freeze-dried, pickled, brine	35	55	11	11	121
Total	**9,525**	**10,249**	**10,974**	**16,266**	**13,266**

Source: Economic Research Service, U. S. Department of Agriculture.

BANANAS

BANANAS: Number of farms, acreage, yield, production, price, and value, by islands, 1983-87

Year	Farms	Acreage		Yield per acre (harvested)	Production	Farm price	Value of sales
		In crop[1]	Harvested				
	Number	Acres		1,000 pounds		Cents per pound	1,000 dollars
				STATE[2]			
1983	183	1,100	860	5.2	4,470	31.2	1,395
1984	180	990	870	10.2	8,900	30.0	2,670
1985	178	1,060	840	9.7	8,160	30.3	2,472
1986	185	1,140	980	9.9	9,700	30.0	2,910
1987	**175**	**1,220**	**1,070**	**10.7**	**11,400**	**29.7**	**3,386**
				HAWAII			
1983	31	365	205	12.6	2,580	26.4	681
1984	32	330	305	10.3	3,140	28.3	889
1985	35	385	260	12.5	3,240	27.5	891
1986	41	440	370	9.5	3,500	28.0	980
1987	**32**	**480**	**380**	**14.8**	**5,610**	**29.1**	**1,633**
				KAUAI			
1983	33	115	95	4.9	470	31.0	146
1984	35	135	110	18.9	2,080	23.6	491
1985	34	155	145	13.7	1,990	26.5	527
1986	40	155	135	15.3	2,070	25.9	536
1987	**38**	**145**	**145**	**13.5**	**1,960**	**25.1**	**492**
				MAUI/MOLOKAI			
1983	21	80	65	4.6	300	25.8	77
1984	20	75	65	8.2	530	27.7	147
1985	19	65	45	7.2	325	29.2	95
1986	16	70	50	10.0	500	30.6	153
1987	**12**	**70**	**70**	**4.6**	**320**	**34.3**	**110**
				OAHU			
1983	98	540	495	2.3	1,120	43.8	491
1984	93	450	390	8.1	3,150	36.3	1,143
1985	90	455	390	6.7	2,605	36.8	959
1986	88	475	425	8.5	3,630	34.2	1,241
1987	**93**	**525**	**475**	**7.4**	**3,510**	**32.8**	**1,151**

[1] As of February following year, i.e., acreage data shown for 1987 is as of February 1, 1988.
[2] Island totals may not add to State totals due to rounding.

BANANAS: Acreage by variety, State of Hawaii, February 1, 1988

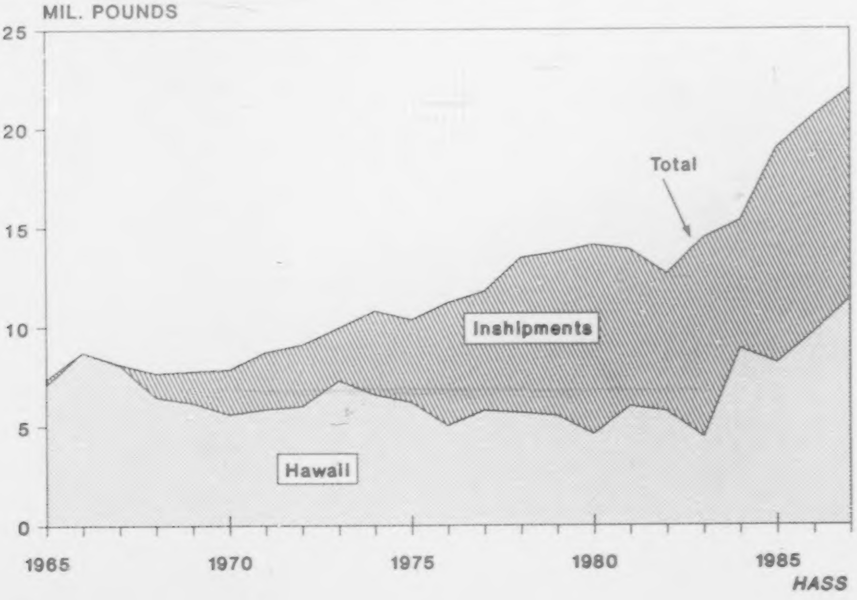
Island	Variety					
	Brazilian[1] (Apple)	Bluefields[2] (Gros Michel)	Cavendish			Others[4]
			Chinese	Williams Hybrid	Robusta[3]	
Hawaii	35	5	*	370	70	*
Kauai	30	15	*	100	*	*
Maui/ Molokai	15	10	*	35	5	5
Oahu	385	*	15	105	5	15
Total	465	30	15	610	80	20

* = Less than 5 acres. [1] Includes Dwarf "Apple". [2] Includes "Cocos" or Dwarf Bluefields. [3] Includes Taiwan. [4] Includes cooking and Lady Finger.

BANANAS: Monthly production, total acreage in crop, and total acreage harvested, by varieties, and price, State of Hawaii, 1983-87

Year	Production													Acreage	
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average	In crop	Harvested
	1,000 pounds													Acres	
	BRAZILIAN (APPLE)														
1983	44	30	25	24	21	23	29	43	49	62	80	110	540	425	380
1984	139	183	276	266	204	177	186	170	172	209	139	89	2,210	365	305
1985	122	73	97	86	80	81	135	249	257	248	228	214	1,870	380	320
1986	166	150	135	143	158	139	151	186	204	193	194	211	2,030	420	365
1987	151	117	150	136	138	137	149	152	171	202	211	206	1,920	465	405
	BLUEFIELDS (GROS MICHEL)														
1983	30	25	26	27	24	27	27	24	26	29	35	40	340	80	60
1984	38	43	40	29	41	37	55	44	41	45	44	33	490	60	55
1985	32	28	18	20	17	21	29	25	28	25	22	25	290	45	40
1986	24	19	20	15	17	16	24	30	23	18	20	14	240	35	30
1987	15	11	10	10	10	9	9	13	9	9	8	7	120	30	30
	CAVENDISH (CHINESE, ROBUSTA, AND WILLIAMS HYBRID)														
1983	323	324	299	204	147	172	232	317	272	318	452	530	3,590	585	415
1984	456	456	536	381	514	474	485	499	514	695	638	552	6,200	545	495
1985	453	392	346	345	332	471	611	614	591	641	609	595	6,000	605	465
1986	556	497	507	437	510	529	624	586	642	857	870	815	7,430	665	565
1987	750	687	755	632	540	703	859	946	804	811	855	1,018	9,360	705	615
	FARM PRICE FOR FRESH MARKET														
	Cents per pound														
1983	29.8	28.4	27.7	28.7	28.6	29.8	31.9	33.8	33.5	32.9	32.3	32.7	31.2		
1984	31.5	31.3	30.7	30.0	29.3	29.5	29.3	29.3	29.7	30.3	29.0	29.9	30.0		
1985	30.4	30.0	30.7	31.0	30.9	30.4	30.0	32.0	31.5	29.3	29.0	29.1	30.3		
1986	29.1	29.1	29.2	30.7	30.6	30.5	29.9	30.5	30.6	29.7	29.8	30.3	30.0		
1987	29.9	29.1	29.3	30.8	30.7	30.2	28.9	29.3	29.2	29.8	30.1	29.8	29.7		

MARKET SUPPLY: Fresh Market Bananas, State of Hawaii, 1965-87



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PAPAYAS

PAPAYAS: Number of farms, acreage, yield, utilization, price, and value, by islands, 1983-87[1]

Year	Farms[2]	Acreage harvested[2]	Yield per acre[3]	Utilized production	Utilization		Price per pound			Value of utilized production
					Fresh	Processed	Fresh	Processed[4]	All	
	Number	Acres	1,000 pounds				Cents			1,000 dollars
					STATE					
1983	227	2,120	29.0	61,400	46,300	15,100	23.6	4.4	18.9	11,591
1984	306	2,590	31.1	80,500	67,000	13,500	13.1	3.1	11.4	9,196
1985	315	2,650	22.8	60,400	49,250	11,150	16.9	2.3	14.2	8,579
1986	311	2,355	25.9	61,000	50,100	10,900	21.7	2.3	18.2	11,123
1987	**293**	**2,350**	**28.5**	**67,000**	**56,000**	**11,000**	**19.3**	**2.2**	**16.5**	**11,050**
					HAWAII					
1983	140	[5]2,000	29.5	59,040	44,050	14,990	23.3		18.5	10,912
1984	219	2,165	30.6	66,140	52,680	13,460	[5]13.5		11.4	7,531
1985	238	2,350	23.6	55,375	44,285	11,090	16.4		13.6	7,506
1986	241	2,178	26.3	57,270	46,510	10,760	21.6		18.0	10,274
1987	**231**	**2,183**	**28.9**	**63,095**	**52,430**	**10,665**	**19.0**		**16.1**	**10,173**
					KAUAI					
1983	41	25	31.8	795	780	15	[6]25.3		[6]25.1	[6]350
1984	42	320	36.1	11,554	11,554	0	[6]10.3		[6]10.3	[6]1,236
1985	36	215	15.7	3,365	3,365	0	[6]19.3		[6]19.3	[6]662
1986	30	112	20.0	2,240	2,240	0	[6]22.5		[6]22.5	[6]530
1987	**24**	**98**	**21.6**	**2,115**	**2,035**	**80**	**[6]21.8**		**[6]21.1**	**[6]468**
					MAUI/MOLOKAI					
1983	5	25	24.0	600	600	0	[6]		[6]	[6]
1984	5	20	21.1	420	420	0	[6]		[6]	[6]
1985	4	5	13.0	65	65	0	[6]		[6]	[6]
1986	6	8	14.4	115	115	0	[6]		[6]	[6]
1987	**6**	**8**	**13.1**	**105**	**105**	**0**	[6]		[6]	[6]
					OAHU					
1983	41	70	13.8	965	870	95	37.0		34.1	329
1984	40	85	28.0	2,386	2,346	40	18.2		18.0	429
1985	37	80	19.9	1,595	1,535	60	26.7		25.8	411
1986	34	57	24.1	1,375	1,235	140	25.6		23.2	319
1987	**32**	**61**	**27.6**	**1,685**	**1,430**	**255**	**28.2**		**24.3**	**409**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Average of monthly estimates.
[3] Utilized production divided by acreage harvested.
[4] Island data not shown separately to avoid disclosure of individual operations.
[5] Revised.
[6] Maui/Molokai combined with Kauai to avoid disclosure of individual operations.

PAPAYAS: Acreage, utilization, price, and outshipments, State of Hawaii, 1983-87

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average
						Area harvested – Acres[1]							
1983	2,025	2,050	2,035	2,095	2,090	2,070	2,095	2,095	2,095	2,220	2,195	2,375	2,120
1984	2,330	2,370	2,430	2,455	2,570	2,630	2,710	2,800	2,690	2,635	2,725	2,765	2,590
1985	2,810	2,920	2,890	2,820	2,820	2,695	2,725	2,625	2,345	2,410	2,385	2,395	2,650
1986	2,430	2,485	2,405	2,390	2,380	2,365	2,310	2,250	2,340	2,375	2,265	2,270	2,355
1987	**2,420**	**2,395**	**2,400**	**2,330**	**2,310**	**2,300**	**2,330**	**2,350**	**2,345**	**2,325**	**2,445**	**2,240**	**2,350**
						Utilization (fresh and processed) – 1,000 pounds							
1983	4,701	3,341	2,607	2,991	6,019	5,820	6,616	5,310	2,732	4,987	8,556	7,720	61,400
1984	6,505	6,127	7,501	8,959	8,028	6,022	6,931	8,443	5,011	5,751	6,833	4,389	80,500
1985	4,704	5,544	5,642	4,531	4,389	4,249	6,944	5,446	4,561	5,634	4,838	3,918	60,400
1986	4,565	4,890	5,545	5,605	5,845	4,875	5,480	4,055	3,655	6,480	4,885	5,120	61,000
1987	**4,540**	**4,310**	**4,010**	**4,720**	**5,100**	**5,895**	**6,040**	**5,865**	**5,830**	**6,770**	**7,140**	**6,780**	**67,000**
						Total fresh papaya utilization – 1,000 pounds							
1983	3,565	2,806	2,226	2,533	4,744	4,702	4,518	3,447	2,070	3,897	6,124	5,668	46,300
1984	5,100	5,039	6,049	6,790	5,977	5,094	5,472	7,478	4,788	5,458	5,999	3,756	67,000
1985	4,267	4,400	4,791	4,079	3,914	3,619	5,134	3,989	3,722	4,594	3,383	3,358	49,250
1986	3,925	3,970	4,215	4,295	4,910	3,700	4,140	3,425	3,120	5,805	4,155	4,440	50,100
1987	**4,000**	**3,665**	**3,465**	**4,125**	**4,175**	**4,525**	**4,785**	**4,660**	**4,770**	**5,900**	**5,940**	**5,990**	**56,000**
						Intrastate fresh papaya utilization – 1,000 pounds							
1983	995	793	565	650	840	875	863	847	473	964	1,463	1,332	10,660
1984	1,156	1,253	1,598	1,248	1,310	1,381	1,064	1,361	743	786	1,500	790	14,190
1985	1,697	1,676	1,427	1,225	1,320	1,123	1,352	1,049	1,125	1,585	1,371	1,250	16,200
1986	1,490	1,530	1,531	1,436	1,495	1,047	1,378	1,075	1,034	1,513	1,111	1,435	16,075
1987	**1,203**	**1,160**	**960**	**1,372**	**1,225**	**1,197**	**1,277**	**1,381**	**1,467**	**1,622**	**1,469**	**1,577**	**15,910**
						Outshipments of fresh papayas – 1,000 pounds							
1983	2,570	2,013	1,661	1,883	3,904	3,827	3,655	2,600	1,597	2,933	4,661	4,336	35,640
1984	3,944	3,786	4,451	5,542	4,667	3,713	4,408	6,117	4,045	4,672	4,499	2,966	52,810
1985	2,570	2,724	3,364	2,854	2,594	2,496	3,782	2,940	2,597	3,009	2,012	2,108	33,050
1986	2,435	2,440	2,684	2,859	3,415	2,653	3,872	2,350	2,086	4,292	3,044	3,005	34,025
1987	**2,797**	**2,505**	**2,505**	**2,753**	**2,950**	**3,328**	**3,508**	**3,279**	**3,303**	**4,278**	**4,471**	**4,413**	**40,090**
						Farm price for fresh market sales (to all markets) – Cents per pound							
1983	20.7	31.1	41.0	54.9	38.7	17.2	20.7	15.7	31.0	27.3	11.5	8.2	23.6
1984	12.0	16.4	15.3	11.7	15.7	12.7	12.7	9.6	11.8	13.5	12.8	12.9	13.1
1985	16.2	17.1	18.0	19.7	21.0	21.1	17.0	14.0	14.4	14.7	14.8	15.1	16.9
1986	22.1	23.1	23.9	23.5	27.4	21.2	20.9	22.1	25.6	18.7	14.5	19.2	21.7
1987	**19.4**	**20.7**	**27.0**	**27.6**	**24.4**	**21.4**	**18.6**	**17.3**	**16.7**	**16.2**	**15.1**	**15.0**	**19.3**

[1] Total is average of monthly data.

FRESH VEGETABLES: MARKET SUPPLY

MARKET SUPPLY: Fresh market vegetables, State of Hawaii, 1983-87

Commodity		1983	1984	1985	1986	1987	Hawaii market share 1987
		1,000 pounds					Percent
Beans, snap:	Inshipments	111	72	148	330	416	
	Hawaii	1,360	1,390	1,250	980	890	68
Bittermelon:	Inshipments	1	0	4	8	10	
	Hawaii	260	330	210	300	220	96
Broccoli:	Inshipments	3,620	3,832	4,461	5,376	5,695	
	Hawaii	680	660	960	790	675	11
Burdock:	Inshipments	3	2	4	1	1	
	Hawaii	790	820	750	510	580	99+
Cabbage, Chinese:	Inshipments	5	55	55	102	76	
	Hawaii[1]	7,100	6,520	6,970	5,810	6,700	99
Cabbage, head:	Inshipments	69	325	199	289	184	
	Hawaii	15,000	13,190	13,300	14,000	14,950	99
Cabbage, mustard:	Inshipments	42	24	56	62	61	
	Hawaii	1,650	1,770	1,520	1,600	1,450	96
Carrots:	Inshipments	8,304	8,488	9,137	9,624	10,254	
	Hawaii	150	220	200	160	80	1
Cauliflower:	Inshipments	1,214	1,308	1,185	1,575	1,961	
	Hawaii	375	410	850	710	320	14
Celery:	Inshipments	3,882	3,620	4,026	4,909	5,141	
	Hawaii	3,960	4,050	3,450	2,680	2,730	35
Corn, sweet:	Inshipments	251	248	382	767	865	
	Hawaii	880	1,300	1,060	1,040	1,480	63
Cucumbers:	Inshipments	1,550	1,516	1,708	2,024	1,732	
	Hawaii	5,200	4,870	4,200	3,720	3,960	70
Daikon:	Inshipments	1	0	50	23	19	
	Hawaii[1]	2,400	2,390	3,040	3,330	3,130	99
Dasheen:	Inshipments	4	7	10	8	12	
	Hawaii	450	240	210	200	155	93
Eggplant:	Inshipments	139	64	133	196	308	
	Hawaii	1,480	1,380	1,340	1,300	1,290	81
Ginger root:	Inshipments	173	82	264	329	210	
	Hawaii	5,140	5,050	5,425	5,900	8,800	98
Lettuce:	Inshipments	11,573	12,760	16,021	16,519	17,196	
	Hawaii	12,200	10,200	9,400	8,700	7,000	29
Lotus root:	Inshipments	4	1	18	13	8	
	Hawaii	185	180	185	150	145	95
Onions, dry:	Inshipments	13,260	14,463	14,016	15,679	15,530	
	Hawaii	2,280	2,660	1,890	1,480	1,980	11
Onions, green:	Inshipments	207	191	204	184	232	
	Hawaii	1,090	1,240	1,410	1,440	1,220	84
Parsley, American:	Inshipments	37	21	37	44	64	
	Hawaii	330	415	310	320	310	83
Peas, Chinese:	Inshipments	279	328	305	336	280	
	Hawaii	80	80	80	70	70	20
Peppers, green:	Inshipments	1,789	1,836	1,788	1,392	1,595	
	Hawaii	1,190	1,460	1,480	2,050	2,300	59
Potatoes:	Inshipments[2]	37,653	40,741	40,916	43,170	42,777	
	Hawaii	--	--	--	--	--	--
Pumpkins:	Inshipments	500	519	1,087	1,088	1,040	
	Hawaii	340	330	260	200	140	12
Radish:	Inshipments	10	10	4	14	15	
	Hawaii	330	300	310	205	320	96

See footnotes at end of table.

Continued

MARKET SUPPLY: Fresh market vegetables, State of Hawaii, 1983-87 -- Continued

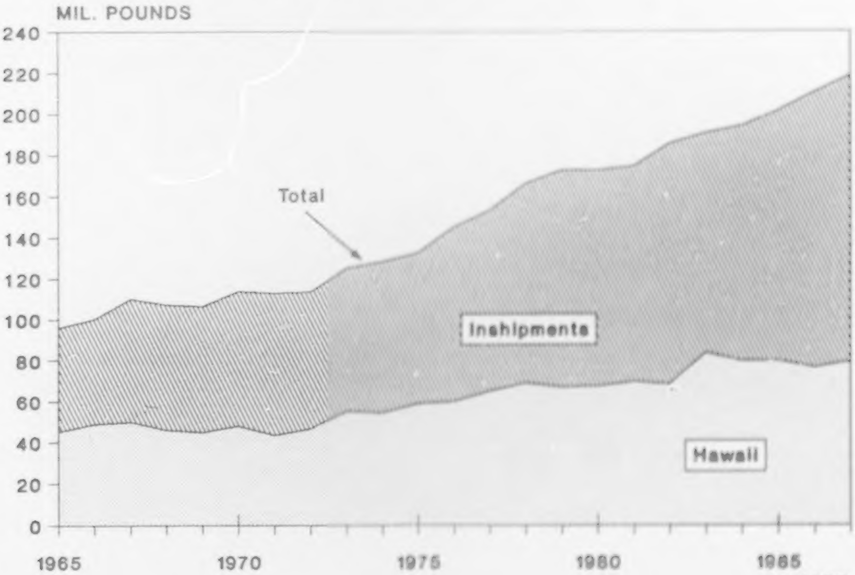
Commodity		1983	1984	1985	1986	1987	Hawaii market share 1987
		1,000 pounds					Percent
Romaine:	Inshipments	742	1,015	1,332	1,673	**1,951**	
	Hawaii	2,620	2,320	2,520	2,300	**1,860**	**49**
Squash, Italian:	Inshipments	1,327	1,030	1,015	1,125	**1,177**	
	Hawaii	740	960	1,160	1,030	**1,000**	**46**
Squash, Oriental:	Inshipments	69	48	101	143	**83**	
	Hawaii	555	650	490	400	**315**	**79**
Sweetpotatoes:	Inshipments	633	614	719	676	**799**	
	Hawaii	1,860	1,720	1,910	2,100	**1,600**	**67**
Taro:	Inshipments	793	677	1,013	667	**917**	
	Hawaii[1]	346	290	590	490	**600**	**40**
Tomatoes:	Inshipments	8,195	9,434	9,824	11,234	**11,378**	
	Hawaii	8,700	7,700	7,800	6,700	**7,000**	**38**
Watercress:	Inshipments	8	6	0	9	**22**	
	Hawaii	1,300	1,400	1,530	1,200	**1,230**	**98**
All other vegetables:	Inshipments	7,428	8,671	8,728	9,488	**10,696**	
	Hawaii	2,460	3,035	[3]3,570	4,350	**4,400**	**29**
Unspecified vegetables:	Inshipments[4]	3,440	2,500	2,652	5,007	**6,780**	
Total:	Inshipments	107,316	114,508	121,602	134,084	**139,485**	
	Hawaii	83,481	79,530	79,630	76,215	**78,900**	**36**
	All	190,797	194,038	201,232	210,299	**218,385**	

-- = Negligible.

[1] Fresh market only. [2] For processing and fresh market. (Potato production for Hawaii included with all other vegetables for Hawaii to avoid disclosure.) [3] Revised. [4] Proration of shipments of unspecified mixed vegetables destined for outlying islands.

Source of inshipment data: Market News Service, Hawaii Department of Agriculture.

MARKET SUPPLY: Fresh Market Vegetables, State of Hawaii, 1965-87



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SNAP BEANS

SNAP BEANS: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm Price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	185	7.4	1,360	62.8	854
1984	170	8.2	1,390	66.0	917
1985	160	7.8	1,250	77.2	965
1986	130	7.5	980	77.2	757
1987	**150**	**5.9**	**890**	**74.3**	**661**
			HAWAII/KAUAI[2]		
1983	30	6.0	180	64.9	117
1984	20	6.8	135	67.0	90
1985	20	6.0	120	74.1	89
1986	20	5.0	100	73.5	74
1987	25	4.4	110	63.3	70
			MAUI/MOLOKAI		
1983	105	7.3	770	60.3	464
1984	110	8.4	925	65.2	603
1985	90	8.3	750	73.7	553
1986	60	9.0	540	72.2	390
1987	85	6.2	530	73.8	391
			OAHU		
1983	50	8.2	410	66.7	273
1984	40	8.3	330	67.8	224
1985	50	7.6	380	85.0	323
1986	50	6.8	340	86.1	293
1987	40	6.3	250	80.0	200

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai combined with Hawaii to avoid disclosure of individual operations.

SNAP BEANS: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested[1]					Production[2]					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	17	19	15	13	11	91	121	122	94	61	87.1	73.7	82.2	79.5	69.2
February	18	19	12	16	9	98	108	102	105	65	64.8	65.0	86.6	79.2	76.0
March	23	19	20	16	10	110	133	107	112	84	52.7	57.2	80.8	77.2	80.6
April	17	19	14	16	12	98	114	122	98	100	62.6	58.8	78.0	78.7	69.6
May	19	18	16	14	18	129	130	119	106	97	59.5	60.4	71.5	80.6	64.4
June	22	17	14	15	19	147	112	120	103	109	49.1	65.7	71.0	77.7	70.4
July	18	16	12	13	21	109	114	102	70	95	57.7	63.2	66.4	84.3	74.6
August	18	16	11	9	22	122	118	89	44	70	60.6	65.4	73.9	80.5	78.5
September	16	14	10	9	13	121	117	82	61	75	63.8	64.9	78.4	68.4	83.3
October	14	14	10	11	10	92	123	106	64	52	68.9	64.6	80.5	69.7	76.5
November	17	14	9	10	16	116	112	99	48	47	69.0	76.7	71.0	72.7	79.3
December	19	15	13	12	11	127	88	80	75	35	67.9	82.6	88.5	72.0	82.4
Total or average	185	170	160	130	150	1,360	1,390	1,250	980	890	62.8	66.0	77.2	77.2	74.3

[1] Sum of monthly data exceeds total because harvest period longer than 1 month.
[2] Sum of monthly estimates may not add to annual total due to rounding.

CHINESE CABBAGE: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm Price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	370	23.6	8,750	10.8	945
1984	400	19.8	7,910	13.1	1,036
1985	370	22.4	8,300	13.6	1,129
1986	350	20.6	7,200	14.2	1,022
1987	**400**	**20.0**	**8,000**	**15.9**	**1,272**
			HAWAII		
1983	355	23.9	8,490	10.7	908
1984	380	19.6	7,460	12.7	947
1985	330	22.7	7,480	13.0	972
1986	330	20.6	6,800	14.1	959
1987	**330**	**21.0**	**6,920**	**15.6**	**1,080**
			KAUAI/MAUI/OAHU[2]		
1983	15	17.3	260	14.4	37
1984	20	22.5	450	19.7	89
1985	40	20.5	820	19.1	157
1986	20	20.0	400	15.8	63
1987	**70**	**15.4**	**1,080**	**17.8**	**192**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai and Oahu combined with Maui to avoid disclosure of individual operations.

CHINESE CABBAGE: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested[1]					Processing and fresh market									
						Production					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	31	33	30	28	31	581	609	685	580	618	11.2	12.7	21.3	12.7	15.4
February	32	38	38	28	37	711	935	776	759	731	11.1	12.4	17.6	13.9	14.7
March	39	61	43	37	39	1,146	1,299	955	778	1,088	10.3	10.7	15.0	13.5	14.2
April	36	44	38	33	33	1,132	691	1,211	613	874	12.6	9.2	12.5	14.2	12.4
May	23	36	28	27	31	698	514	539	547	585	15.4	9.8	11.8	14.9	11.3
June	29	25	28	30	31	601	594	579	518	577	11.9	9.8	11.5	14.2	11.6
July	25	28	29	29	31	654	561	590	571	545	9.5	11.8	11.4	12.5	17.2
August	30	31	27	27	28	674	598	609	569	563	10.0	13.7	12.5	13.2	19.9
September	32	30	29	22	31	662	532	520	492	601	9.5	14.2	14.0	14.1	18.6
October	28	27	27	27	29	616	543	584	521	623	9.1	17.2	11.6	17.2	18.4
November	33	28	30	31	36	646	516	603	576	589	8.1	20.3	11.0	15.7	19.0
December	32	19	23	31	43	629	518	649	676	606	9.0	21.2	11.0	14.8	21.5
Total or average	370	400	370	350	400	8,750	7,910	8,300	7,200	8,000	10.8	13.1	13.6	14.2	15.9

[1] Sum of monthly estimates may not add to annual total due to rounding.

HEAD CABBAGE

HEAD CABBAGE: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	550	27.3	15,000	11.8	1,770
1984	470	28.1	13,190	15.6	2,058
1985	460	28.9	13,300	16.3	2,168
1986	490	28.6	14,000	15.5	2,170
1987	**510**	**29.3**	**14,950**	**14.6**	**2,183**
			HAWAII/KAUAI/OAHU[2]		
1983	130	23.1	3,000	10.2	306
1984	125	21.5	2,690	12.5	336
1985	130	22.7	2,950	14.9	440
1986	150	20.1	3,020	14.4	435
1987	**150**	**20.0**	**3,000**	**15.0**	**450**
			MAUI		
1983	420	28.6	12,000	12.2	1,464
1984	345	30.4	10,500	16.4	1,722
1985	330	31.4	10,350	16.7	1,728
1986	340	32.3	10,980	15.8	1,735
1987	**360**	**33.2**	**11,950**	**14.5**	**1,733**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai and Oahu combined with Hawaii to avoid disclosure of individual operations.

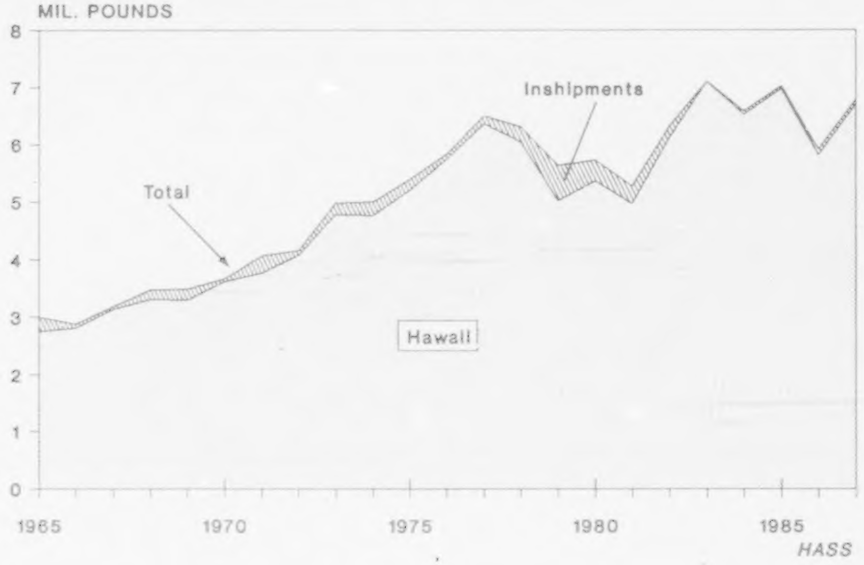
HEAD CABBAGE: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested[1]					Production[1]					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	42	42	32	42	43	1,220	1,184	1,130	1,232	1,205	13.3	14.4	18.1	13.6	14.5
February	52	39	36	42	43	1,269	1,158	1,053	1,166	1,265	12.8	16.5	17.9	11.8	14.6
March	53	45	40	42	44	1,420	1,278	1,167	1,261	1,351	11.7	16.2	14.9	13.5	13.4
April	51	41	40	41	46	1,201	1,088	1,069	1,186	1,240	10.6	15.0	16.8	11.8	12.0
May	49	40	47	41	39	1,224	1,177	1,029	1,263	1,160	10.2	13.7	15.8	14.5	12.6
June	50	41	40	41	40	1,237	1,162	1,046	1,145	1,204	9.7	13.7	15.9	14.1	11.3
July	47	36	39	41	38	1,227	1,083	1,103	1,204	1,252	9.4	14.5	15.9	16.0	13.0
August	48	40	34	39	41	1,234	1,083	1,096	1,161	1,167	9.9	14.9	17.0	16.4	13.7
September	43	36	36	39	45	1,242	962	1,016	1,057	1,211	12.7	16.6	17.4	18.3	16.0
October	38	37	40	41	43	1,224	991	1,214	975	1,281	13.7	17.6	16.3	20.3	16.2
November	39	38	37	38	44	1,247	943	1,093	1,067	1,146	13.7	18.0	15.4	19.4	17.7
December	38	35	39	43	44	1,255	1,081	1,284	1,283	1,468	14.0	17.5	14.9	17.3	19.3
Total or average	550	470	460	490	510	15,000	13,190	13,300	14,000	14,950	11.8	15.6	16.3	15.5	14.6

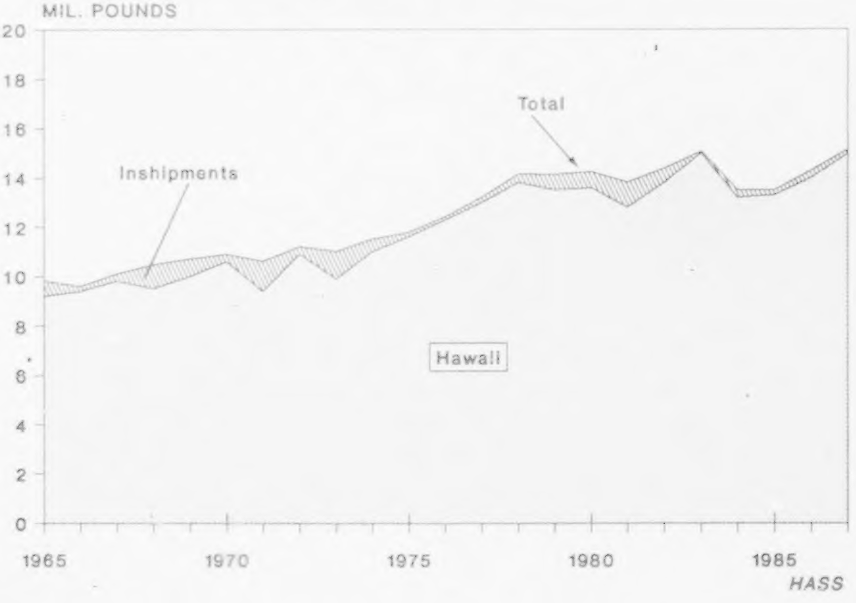
[1] Sum of monthly estimates may not add to State total due to rounding.

FRESH MARKET SUPPLY: Chinese Cabbage and Head Cabbage

MARKET SUPPLY:
Fresh Market Chinese Cabbage,
State of Hawaii, 1965-87



MARKET SUPPLY: Fresh Market Head Cabbage
State of Hawaii, 1965-87



CELERY

CELERY: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE[1]		
1983	110	36.0	3,960	19.7	780
1984	115	35.2	4,050	20.0	810
1985	110	31.4	3,450	19.5	673
1986	100	26.8	2,680	21.5	576
1987	**90**	**30.3**	**2,730**	**20.6**	**562**
			HAWAII		
1983	90	34.9	3,140	19.2	603
1984	100	34.4	3,440	19.3	664
1985	90	30.0	2,700	18.7	505
1986	85	25.4	2,160	20.7	447
1987	**70**	**28.9**	**2,020**	**20.1**	**406**
			MAUI		
1983	20	41.0	820	21.6	177
1984	15	40.7	610	23.9	146
1985	20	37.5	750	22.4	168
1986	15	34.7	520	24.8	129
1987	**20**	**35.5**	**710**	**22.0**	**156**

[1] Sum of island estimates may not add to State total due to rounding.

CELERY: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested					Production					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	7	9	8	11	9	256	321	228	252	183	17.8	29.3	24.4	21.1	22.7
February	7	12	8	7	6	270	345	242	247	181	17.7	28.8	21.7	20.2	23.1
March	8	10	9	8	8	326	381	272	265	254	18.3	23.5	18.7	20.6	22.7
April	9	13	11	9	11	347	391	344	240	329	19.7	19.6	17.4	20.5	19.0
May	10	10	10	8	8	369	391	363	213	302	22.3	16.6	17.4	23.1	17.9
June	10	10	10	6	8	362	382	326	240	287	21.1	17.2	19.4	22.7	19.7
July	10	10	9	10	6	394	396	355	244	220	20.0	17.4	19.2	20.9	20.8
August	10	9	12	9	7	334	347	310	212	206	17.6	16.6	18.8	21.2	20.1
September	10	9	8	8	7	313	330	255	182	227	18.2	16.2	20.3	21.2	18.4
October	9	9	8	8	7	291	309	257	184	193	19.2	17.2	18.4	21.5	18.7
November	10	8	8	7	6	355	228	238	175	165	19.2	18.2	20.3	22.3	22.9
December	10	6	9	9	7	343	229	260	226	183	23.4	20.2	20.4	23.3	24.1
Total or average	110	115	110	100	90	3,960	4,050	3,450	2,680	2,730	19.7	20.0	19.5	21.5	20.6

SWEET CORN: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	250	3.5	880	33.8	297
1984	315	4.1	1,300	35.8	465
1985	255	4.2	1,060	36.6	388
1986	255	4.1	1,040	36.0	374
1987	**345**	**4.3**	**1,480**	**34.2**	**506**
			HAWAII/KAUAI[2]		
1983	25	5.4	135	31.3	42
1984	40	5.8	230	28.4	65
1985	35	5.1	180	31.2	56
1986	20	5.5	110	29.4	32
1987	**55**	**5.7**	**315**	**33.4**	**105**
			MAUI/MOLOKAI		
1983	20	4.0	80	46.3	37
1984	25	5.6	140	42.0	59
1985	20	4.0	80	42.3	34
1986	15	6.0	90	39.0	35
1987	**15**	**5.7**	**85**	**40.5**	**34**
			OAHU		
1983	205	3.2	665	32.8	218
1984	250	3.7	930	36.7	341
1985	200	4.0	800	37.2	298
1986	220	3.8	840	36.5	307
1987	**275**	**3.9**	**1,080**	**34.0**	**367**

[1] Sum of island estimates may not add to State total due to rounding.

[2] Kauai combined with Hawaii to avoid disclosure of individual operations.

SWEET CORN: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested					Production[1]					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	5	12	16	11	18	10	43	60	43	31	33.3	36.7	37.0	37.3	33.7
February	9	12	15	14	17	13	40	53	66	54	33.8	37.9	37.0	36.3	37.3
March	6	19	14	18	26	18	88	47	113	126	34.5	45.3	38.0	39.0	41.5
April	11	22	16	22	33	60	95	78	75	140	32.4	36.5	39.4	38.1	40.7
May	26	25	22	24	35	95	105	120	100	135	33.2	36.2	38.9	39.6	38.1
June	28	22	27	24	37	103	135	127	98	198	31.9	37.3	37.8	34.8	30.8
July	26	40	29	35	34	102	171	132	131	215	37.7	37.4	36.4	31.2	30.9
August	27	42	27	22	40	90	129	129	83	176	34.4	40.2	36.4	32.5	31.8
September	31	37	23	26	34	85	135	77	99	130	31.5	37.1	33.6	38.0	34.6
October	31	31	22	21	25	116	105	71	88	122	31.7	28.6	34.6	36.6	33.3
November	30	30	29	23	33	120	152	119	85	112	35.3	28.5	34.9	34.3	29.3
December	20	23	15	15	13	68	102	47	59	41	36.3	31.2	32.9	35.7	32.9
Total or average	250	315	255	255	345	880	1,300	1,060	1,040	1,480	33.8	35.8	36.6	36.0	34.2

[1] Sum of monthly estimates may not add to annual total due to rounding.

CUCUMBERS

CUCUMBERS: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	250	20.8	5,200	26.6	1,383
1984	230	21.2	4,870	27.7	1,349
1985	260	16.2	4,200	29.7	1,247
1986	220	16.9	3,720	31.8	1,183
1987	**200**	**19.8**	**3,960**	**28.2**	**1,117**
			HAWAII		
1983	100	33.2	3,320	23.9	793
1984	100	30.6	3,060	26.1	799
1985	95	23.2	2,200	27.2	598
1986	70	23.1	1,620	28.1	455
1987	**85**	**24.9**	**2,120**	**24.4**	**517**
			KAUAI		
1983	20	9.5	190	28.6	54
1984	15	16.0	240	29.0	70
1985	15	14.0	210	27.9	59
1986	25	11.2	280	33.4	94
1987	**15**	**16.7**	**250**	**36.6**	**92**
			MAUI/MOLOKAI		
1983	50	11.2	560	25.9	145
1984	55	12.7	700	27.8	195
1985	55	10.2	560	31.6	177
1986	50	12.0	600	33.2	199
1987	**45**	**12.4**	**560**	**30.1**	**169**
			OAHU		
1983	80	14.1	1,130	34.6	391
1984	60	14.5	870	32.8	285
1985	95	12.9	1,230	33.6	413
1986	75	16.3	1,220	35.6	434
1987	**55**	**18.7**	**1,030**	**32.9**	**339**

[1] Sum of island estimates may not add to State total due to rounding.

CUCUMBERS: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested[1]					Production[2]					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	24	46	56	23	22	328	522	296	200	215	32.8	25.4	35.3	37.9	33.7
February	24	32	21	21	24	380	387	225	262	220	37.1	33.4	36.8	34.3	37.7
March	20	28	26	22	13	257	573	228	203	231	35.2	32.2	33.3	38.3	37.9
April	25	29	23	17	20	395	351	368	231	346	33.0	28.6	30.4	37.2	29.9
May	31	27	37	17	26	557	472	425	335	468	22.9	27.4	27.5	32.1	22.4
June	31	24	33	27	24	611	356	418	376	390	20.3	22.5	27.4	26.3	23.0
July	28	24	32	25	21	374	365	489	439	427	21.6	23.1	29.1	24.4	26.8
August	27	18	28	21	24	422	342	401	349	454	23.3	25.7	28.0	26.6	24.0
September	22	26	32	23	18	324	405	484	369	336	27.0	26.0	26.3	29.0	28.6
October	23	23	26	23	22	357	330	333	353	396	31.2	27.9	26.6	34.7	27.9
November	29	27	24	19	21	522	435	270	301	278	26.3	27.9	29.5	34.6	28.8
December	42	25	21	24	18	673	332	263	302	199	22.1	30.4	34.4	37.6	33.2
Total or average	250	230	260	220	200	5,200	4,870	4,200	3,720	3,960	26.6	27.7	29.7	31.8	26.2

[1] Sum of monthly data exceeds total because harvest period longer than 1 month.
[2] Sum of monthly estimates may not add to annual total due to rounding.

DAIKON: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE[1]		
1983	190	16.5	3,140	15.7	493
1984	200	15.0	3,000	17.1	513
1985	260	13.8	3,600	17.8	641
1986	260	15.0	3,900	17.6	686
1987	**250**	**14.8**	**3,700**	**17.1**	**633**
			HAWAII		
1983	80	19.8	1,580	12.2	193
1984	80	15.0	1,200	11.6	139
1985	130	13.8	1,800	14.7	265
1986	130	14.6	1,900	14.4	274
1987	**145**	**15.2**	**2,200**	**16.1**	**354**
			MAUI/OAHU[2]		
1983	110	14.2	1,560	19.2	300
1984	120	15.0	1,800	20.8	374
1985	130	13.8	1,800	20.9	376
1986	130	15.4	2,000	20.6	412
1987	**105**	**14.3**	**1,500**	**18.6**	**279**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Maui combined with Oahu to avoid disclosure of individual operations.

DAIKON: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested[1]					Processing and fresh market									
						Production					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	15	18	18	25	21	329	294	280	361	305	20.6	14.9	19.7	17.9	16.6
February	14	17	17	22	21	272	252	229	324	310	15.1	15.5	21.8	16.0	16.9
March	16	17	21	27	18	271	301	273	284	313	12.6	16.9	20.6	16.3	16.8
April	16	17	20	25	23	258	249	351	364	331	18.9	15.0	16.8	17.6	15.8
May	16	15	21	23	20	288	247	312	340	300	16.2	15.2	14.3	17.3	15.8
June	16	18	24	20	21	260	260	278	291	336	14.0	15.7	17.1	16.5	16.1
July	17	15	23	18	22	260	211	323	299	317	13.4	16.4	18.0	19.2	17.1
August	17	17	25	21	20	229	231	324	339	315	13.4	19.4	17.9	18.4	17.4
September	16	15	24	19	19	227	161	336	403	297	15.5	20.3	16.5	17.5	16.1
October	16	19	22	20	19	212	289	321	318	263	15.5	19.8	16.1	16.0	16.9
November	15	15	20	20	21	255	235	235	217	272	15.9	18.0	17.1	17.1	19.0
December	16	17	25	20	25	279	270	338	360	341	15.8	19.4	19.0	20.7	20.6
Total or average	190	200	260	260	250	3,140	3,000	3,600	3,900	3,700	15.7	17.1	17.8	17.6	17.1

[1] Sum of monthly estimates may not add to State total due to rounding.

EGGPLANT

EGGPLANT: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	60	24.7	1,480	48.0	710
1984	60	23.0	1,380	44.2	610
1985	55	24.4	1,340	51.0	683
1986	55	23.6	1,300	49.7	646
1987	55	**23.5**	**1,290**	**53.4**	**689**
			HAWAII/MAUI/MOLOKAI[2]		
1983	15	24.0	360	40.7	147
1984	15	22.0	330	41.3	136
1985	10	21.0	210	41.7	88
1986	6	20.0	120	43.2	52
1987	15	**22.7**	340	**50.9**	**173**
			KAUAI		
1983	15	26.7	400	42.6	170
1984	10	26.0	260	41.0	107
1985	10	28.0	280	48.5	136
1986	7	25.7	180	50.0	90
1987	2	**12.5**	25	**52.5**	**13**
			OAHU		
1983	30	24.0	720	54.6	393
1984	35	22.6	790	46.4	367
1985	35	24.3	850	54.0	459
1986	42	23.8	1,000	50.4	504
1987	**38**	**24.3**	**925**	**54.4**	**503**

[1] Sum of island estimates may not add to state total due to rounding.

[2] Maui and Molokai combined with Hawaii to avoid disclosure of individual operations.

LETTUCES (HEAD, SEMI-HEAD): Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	840	14.5	12,200	23.0	2,806
1984	730	14.0	10,200	24.1	2,458
1985	650	14.5	9,400	24.9	2,341
1986	620	14.0	8,700	27.2	2,366
1987	**520**	**13.5**	**7,000**	**27.4**	**1,918**
			HAWAII		
1983	350	12.9	4,520	21.2	958
1984	370	11.9	4,400	19.9	876
1985	340	10.6	3,590	21.6	775
1986	280	8.9	2,500	24.5	613
1987	**245**	**8.2**	**2,000**	**27.1**	**542**
			KAUAI/OAHU[2]		
1983	120	14.1	1,690	36.0	608
1984	125	11.2	1,400	42.0	588
1985	120	13.3	1,590	36.4	579
1986	120	12.5	1,500	36.3	545
1987	**95**	**13.9**	**1,320**	**35.9**	**474**
			MAUI/MOLOKAI		
1983	370	16.2	5,990	20.7	1,240
1984	235	18.7	4,400	22.6	994
1985	190	22.2	4,220	23.4	987
1986	220	21.4	4,700	25.7	1,208
1987	**180**	**20.4**	**3,680**	**24.5**	**902**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai combined with Oahu to avoid disclosure of individual operations.

LETTUCES (HEAD, SEMI-HEAD): Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested[1]					Production[1]					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	55	69	50	59	48	777	894	686	906	674	27.2	27.1	30.0	28.8	28.6
February	67	71	56	53	49	939	1,030	705	844	711	23.6	26.4	27.8	23.4	29.5
March	82	71	56	58	52	1,302	1,184	954	950	879	19.2	22.3	25.2	23.0	26.5
April	79	66	56	51	48	1,228	1,053	998	770	829	18.4	20.6	21.7	23.9	22.1
May	82	63	61	49	49	1,284	1,035	951	808	726	21.4	21.7	21.0	27.1	23.4
June	76	64	54	51	47	1,184	994	907	753	699	22.2	21.8	22.8	27.9	23.7
July	69	63	61	51	48	1,067	841	849	703	582	21.8	22.6	22.0	28.0	25.1
August	69	71	52	52	42	1,016	916	627	638	488	22.5	22.1	24.1	28.5	28.7
September	68	56	50	52	39	922	740	609	534	429	23.3	23.8	27.1	31.2	30.4
October	61	51	48	50	30	802	545	676	565	377	26.4	29.4	27.2	30.1	28.1
November	63	46	54	50	35	833	490	635	635	301	28.2	31.4	27.1	28.9	35.4
December	69	39	52	44	33	846	478	803	594	305	28.0	28.7	27.3	29.7	43.3
Total or average	840	730	650	620	520	12,200	10,200	9,400	8,700	7,000	23.0	24.1	24.9	27.2	27.4

[1] Sum of monthly estimates may not add to State total due to rounding.

DRY ONIONS

DRY ONIONS: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	150	15.2	2,280	55.4	1,263
1984	200	13.3	2,660	61.4	1,633
1985	165	11.5	1,890	71.6	1,353
1986	140	10.6	1,480	73.9	1,094
1987	**170**	**11.6**	**1,980**	**72.6**	**1,437**
			HAWAII/KAUAI/OAHU[2]		
1983	10	14.0	140	50.5	71
1984	10	11.0	110	49.8	55
1985	5	8.0	40	66.3	27
1986	10	10.0	100	67.0	67
1987	**10**	**13.0**	**130**	**69.6**	**90**
			MAUI/MOLOKAI		
1983	140	15.3	2,140	55.7	1,192
1984	190	13.4	2,550	61.9	1,578
1985	160	11.6	1,850	71.7	1,326
1986	130	10.6	1,380	74.4	1,027
1987	**160**	**11.6**	**1,850**	**72.8**	**1,347**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai and Oahu combined with Hawaii to avoid disclosure of individual operations.

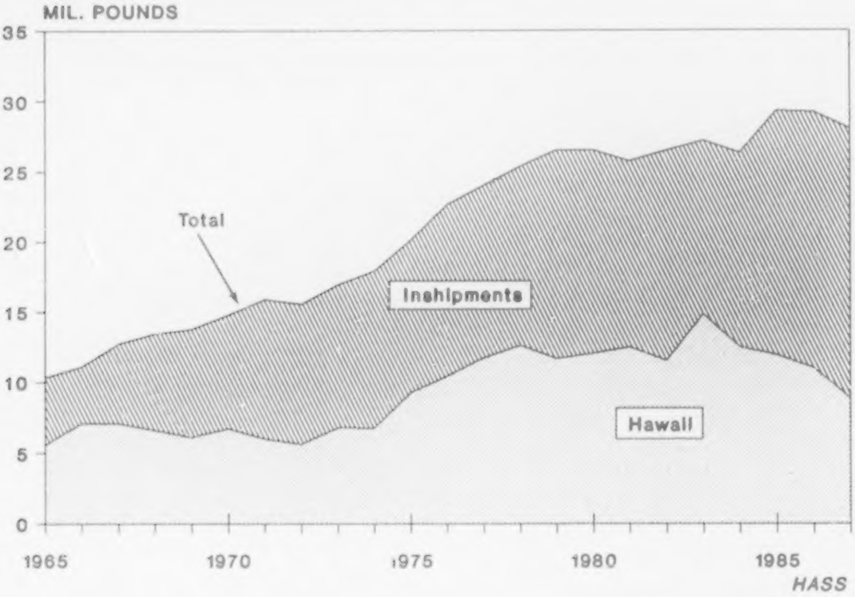
DRY ONIONS: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested[1]					Production					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	8	13	12	7	14	101	128	163	115	176	69.2	73.6	75.6	70.7	74.1
February	12	15	18	23	18	181	147	150	202	157	71.4	66.2	85.5	62.0	66.9
March	12	18	11	11	19	169	326	81	163	169	68.3	43.4	75.6	53.7	51.6
April	10	18	17	14	17	226	255	221	180	217	58.0	44.1	79.3	71.1	59.1
May	16	11	23	5	18	329	189	231	122	202	47.5	63.3	75.9	78.1	71.8
June	14	14	20	7	12	266	216	209	120	191	37.5	62.2	62.8	85.1	78.1
July	14	19	19	11	23	218	249	197	132	246	31.0	64.0	63.8	83.7	71.4
August	13	17	10	11	12	126	228	133	110	177	38.5	60.9	66.1	80.0	80.0
September	12	19	10	12	10	164	213	132	106	152	49.4	60.1	66.6	85.4	84.5
October	17	16	12	8	4	167	184	142	85	70	70.4	56.8	66.0	83.8	77.8
November	14	21	7	14	10	194	292	129	58	143	70.6	78.5	66.6	80.5	87.1
December	8	19	6	17	13	139	233	102	87	80	78.8	74.6	75.8	77.7	83.5
Total or average	150	200	165	140	170	2,280	2,660	1,890	1,480	1,980	55.4	61.4	71.6	73.9	72.6

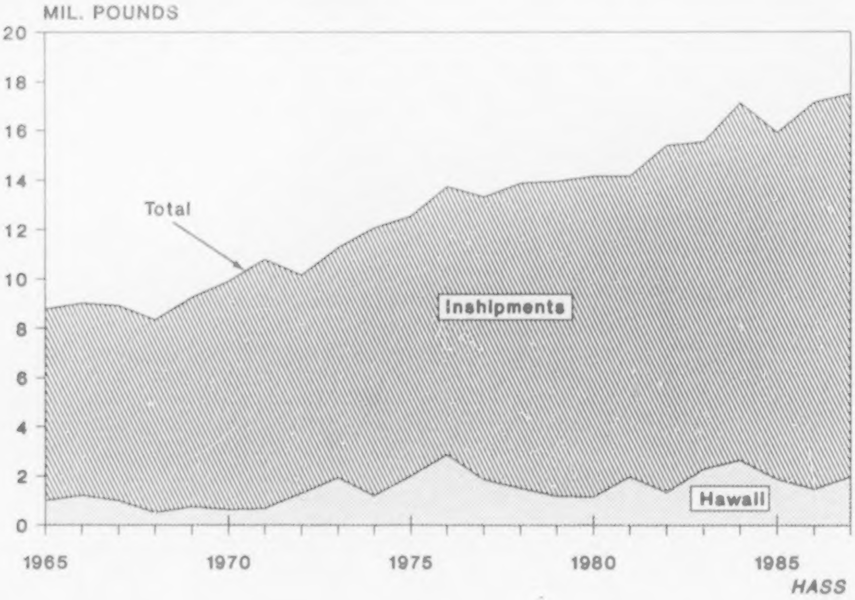
[1] Sum of monthly estimates may not add to State total due to rounding.

FRESH MARKET SUPPLY: Lettuces and Dry Onions

MARKET SUPPLY: Fresh Market Lettuces,
State of Hawaii, 1965-87



MARKET SUPPLY: Fresh Market Dry Onions,
State of Hawaii, 1965-87



GREEN ONIONS

GREEN ONIONS: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	150	7.3	1,090	69.9	762
1984	170	7.3	1,240	69.7	864
1985	200	7.1	1,410	75.7	1,067
1986	190	7.6	1,440	81.3	1,171
1987	**170**	**7.2**	**1,220**	**73.1**	**892**
			HAWAII/KAUAI[2]		
1983	10	7.0	70	69.1	48
1984	15	7.0	105	67.7	71
1985	15	5.7	85	71.9	61
1986	15	6.0	90	83.9	76
1987	**15**	**6.7**	**100**	**73.3**	**73**
			MAUI/MOLOKAI		
1983	10	10.0	100	89.2	89
1984	10	12.5	125	84.1	105
1985	15	9.7	145	79.4	115
1986	10	11.0	110	81.3	89
1987	**15**	**8.0**	**120**	**80.7**	**97**
			OAHU		
1983	130	7.1	920	67.9	625
1984	145	7.0	1,010	68.1	688
1985	170	6.9	1,180	75.5	891
1986	165	7.5	1,240	81.1	1,006
1987	**140**	**7.1**	**1,000**	**72.2**	**722**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Kauai combined with Hawaii to avoid disclosure of individual operations.

GREEN ONIONS: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested					Production					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	10	14	17	17	20	77	106	98	117	126	96.1	71.4	84.4	83.0	75.6
February	11	12	16	16	16	85	90	104	104	116	80.2	77.5	89.3	80.8	70.5
March	13	13	15	15	15	93	96	92	124	116	78.7	74.0	87.9	81.0	63.8
April	13	13	15	15	16	107	99	102	117	114	71.8	70.3	77.0	83.4	64.6
May	14	15	17	12	12	108	115	120	134	107	63.7	61.2	65.7	79.4	61.3
June	14	15	18	14	13	101	116	128	118	115	51.2	58.6	64.3	77.1	59.7
July	13	12	17	13	15	96	101	120	117	103	54.5	60.3	63.8	75.8	61.8
August	12	15	18	17	14	83	112	135	113	91	63.9	69.4	66.8	77.7	76.8
September	11	14	17	16	11	80	93	126	115	83	76.4	76.7	70.9	83.2	87.4
October	11	15	19	17	13	71	107	127	110	87	72.0	74.5	77.8	82.9	87.1
November	14	16	16	18	13	87	112	124	123	103	69.2	74.7	81.7	85.4	92.2
December	14	16	15	20	12	102	93	134	148	59	70.3	71.7	85.8	85.1	95.0
Total or average	150	170	200	190	170	1,090	1,240	1,410	1,440	1,220	69.9	69.7	75.7	81.3	73.1

GREEN PEPPERS: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	80	14.9	1,190	53.0	631
1984	110	13.3	1,460	46.7	682
1985	120	12.3	1,480	55.0	814
1986	190	10.8	2,050	43.6	894
1987	**200**	**11.5**	**2,300**	**45.2**	**1,040**
			HAWAII		
1983	10	11.0	110	53.8	59
1984	10	11.0	110	52.0	57
1985	13	9.2	120	54.3	65
1986	15	6.0	90	55.0	50
1987	**15**	**7.3**	**110**	**51.3**	**56**
			KAUAI		
1983	17	16.5	280	49.5	139
1984	15	15.3	230	40.3	93
1985	20	18.5	370	47.8	177
1986	30	13.7	410	40.2	165
1987[2]	**12**	**15.0**	**180**	**52.2**	**94**
			MAUI/MOLOKAI		
1983	45	14.4	650	54.6	355
1984	70	12.6	880	48.0	422
1985	80	11.0	880	57.8	509
1986	130	10.2	1,330	43.2	575
1987	**173**	**11.6**	**2,010**	**44.2**	**890**
			OAHU		
1983	8	18.8	150	51.7	78
1984	15	16.0	240	45.8	110
1985	7	15.7	110	56.9	63
1986	15	14.7	220	47.4	104
1987[2]					

[1] Sum of island estimates may not add to State total due to rounding.

[2] Oahu combined with Kauai to avoid disclosure of individual operations.

GREEN PEPPERS: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested[1]					Production					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	8	17	33	34	48	54	118	114	148	197	47.9	43.3	52.7	43.4	41.6
February	8	20	31	29	50	65	120	103	206	187	66.6	52.8	63.7	36.2	38.8
March	12	20	35	29	34	94	224	113	177	196	73.8	43.3	66.3	41.2	42.3
April	17	30	26	30	25	137	170	169	161	234	66.2	37.1	65.6	53.0	39.1
May	23	23	17	26	32	165	232	98	160	214	52.5	39.8	60.2	54.9	43.8
June	16	20	15	26	31	133	99	114	136	235	47.6	48.4	59.1	49.5	70.2
July	17	17	22	23	24	119	81	143	139	120	51.7	53.0	49.2	47.8	50.1
August	13	10	21	21	17	106	47	109	125	104	47.7	57.1	48.9	40.3	45.9
September	10	10	17	24	22	75	72	77	136	103	44.7	55.6	48.0	40.8	51.6
October	8	16	18	26	32	69	83	111	226	221	41.3	51.7	45.1	40.8	43.6
November	11	21	20	32	40	79	106	151	210	272	43.2	48.6	49.6	40.4	38.2
December	9	32	25	40	25	94	108	178	226	217	45.5	58.7	50.7	40.4	41.6
Total or average	80	110	120	190	200	1,190	1,460	1,480	2,050	2,300	53.0	46.7	55.0	43.6	45.2

[1] Sum of monthly data exceeds total because harvest period longer than 1 month.

ROMAINE

ROMAINE: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE		
1983	140	18.7	2,620	19.5	511
1984	135	17.2	2,320	21.5	499
1985	150	16.8	2,520	22.8	575
1986	160	14.4	2,300	25.2	580
1987	**160**	**11.6**	**1,860**	**25.2**	**469**
			HAWAII		
1983	80	19.5	1,560	20.1	314
1984	90	16.9	1,520	20.6	313
1985	95	15.3	1,450	21.6	313
1986	90	11.7	1,050	26.2	275
1987	**90**	**7.8**	**700**	**28.7**	**201**
			MAUI		
1983	60	17.7	1,060	18.6	197
1984	45	17.8	800	23.2	186
1985	55	19.5	1,070	24.5	262
1986	70	17.9	1,250	24.4	305
1987	**70**	**16.6**	**1,160**	**23.1**	**268**

ROMAINE: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested[1]					Production[1]					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	7	13	10	11	18	166	170	162	173	143	22.5	25.0	29.4	26.6	26.0
February	11	14	14	10	13	208	228	165	180	169	21.3	25.3	29.2	25.0	27.6
March	14	14	12	12	16	257	254	239	254	220	17.7	20.3	26.0	23.0	22.3
April	14	13	13	10	18	266	214	229	163	204	16.0	16.6	20.7	23.5	21.6
May	14	13	13	12	15	270	210	253	193	191	15.5	18.2	19.9	25.4	20.1
June	15	12	13	12	13	274	198	254	224	190	15.5	17.9	18.0	23.5	20.0
July	12	11	14	16	14	225	203	248	244	151	15.9	19.3	18.5	23.1	21.7
August	11	10	12	13	12	176	205	199	171	128	19.5	20.2	21.5	25.5	26.7
September	10	10	13	13	12	186	188	192	160	122	21.1	19.3	24.6	28.0	28.0
October	11	10	13	13	7	179	182	200	190	120	24.8	24.3	22.7	28.7	27.5
November	10	8	11	18	13	191	143	177	191	125	26.2	28.2	23.9	25.4	33.5
December	11	7	12	20	9	222	125	202	157	97	24.4	29.5	24.6	26.8	41.0
Total or average	140	135	150	160	160	2,620	2,320	2,520	2,300	1,860	19.5	21.5	22.8	25.2	25.2

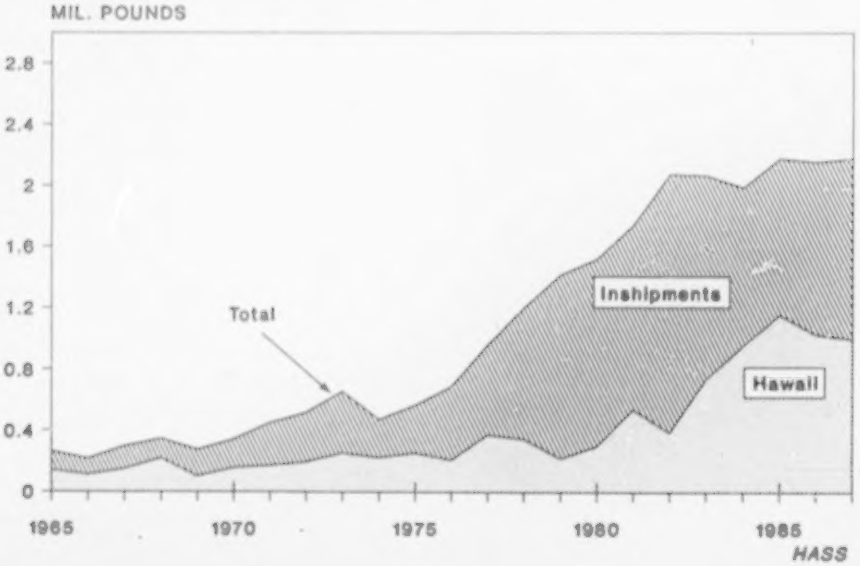
[1] Sum of monthly estimates may not add to State total due to rounding.

SQUASH, ITALIAN: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	70	10.6	740	32.0	237
1984	90	10.7	960	32.2	309
1985	110	10.5	1,160	31.7	368
1986	100	10.3	1,030	32.3	333
1987	**90**	**11.1**	**1,000**	**36.4**	**364**
			HAWAII		
1983	37	10.0	370	31.6	117
1984	40	10.0	400	30.6	122
1985	40	9.5	380	29.5	112
1986	45	8.2	370	31.0	115
1987	**45**	**7.2**	**325**	**34.2**	**111**
			KAUAI/OAHU[2]		
1983	6	11.7	70	35.1	25
1984	6	11.7	70	35.6	25
1985	4	10.0	40	35.0	14
1986	2	10.0	20	35.5	7
1987	**5**	**13.0**	**65**	**39.0**	**25**
			MAUI		
1983	27	11.1	300	31.8	95
1984	44	11.1	490	33.0	162
1985	66	11.2	740	32.7	242
1986	53	12.1	640	33.0	211
1987	**40**	**15.3**	**610**	**37.3**	**228**

[1] Sum of island estimates may not add to State total due to rounding.
[2] Oahu combined with Kauai to avoid disclosure of individual operations.

MARKET SUPPLY:
Fresh Market Squash, Italian,
State of Hawaii, 1965-87



HASS

SWEETPOTATOES

SWEETPOTATOES: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	190	9.8	1,860	25.4	472
1984	175	9.8	1,720	27.3	470
1985	200	9.6	1,910	28.6	546
1986	210	10.0	2,100	27.1	569
1987	**180**	**8.9**	**1,600**	**28.6**	**458**
			HAWAII/KAUAI[2]		
1983	15	11.3	170	25.9	44
1984	15	9.3	140	27.9	39
1985	15	8.7	130	29.6	38
1986	15	10.0	150	29.8	45
1987	**15**	**9.3**	**140**	**33.1**	**46**
			MAUI/MOLOKAI		
1983	115	9.5	1,090	22.3	243
1984	120	9.7	1,160	24.8	288
1985	155	9.5	1,480	27.1	401
1986	165	9.6	1,590	24.6	391
1987	**155**	**8.7**	**1,350**	**27.4**	**370**
			OAHU		
1983	60	10.0	600	30.8	185
1984	40	10.5	420	34.1	143
1985	30	10.0	300	35.7	107
1986	30	12.0	360	37.0	133
1987	**10**	**11.0**	**110**	**37.8**	**42**

[1] Sum of island estimates may not add to State total due to rounding.

[2] Kauai combined with Hawaii to avoid disclosure of individual operations.

SWEETPOTATOES: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested					Production					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	13	13	9	18	19	168	143	133	198	141	25.0	27.6	29.7	28.0	24.4
February	13	17	16	16	19	140	133	131	155	114	26.1	27.8	29.8	26.2	27.1
March	15	12	13	13	18	122	152	81	134	79	25.5	27.4	31.5	26.2	29.0
April	15	14	21	14	19	128	167	145	188	105	26.5	26.9	30.2	25.5	29.3
May	18	14	20	20	19	172	193	170	198	82	25.1	26.0	30.8	27.6	31.1
June	20	12	17	19	15	225	151	206	197	125	24.2	26.0	29.3	28.3	31.1
July	17	16	16	18	12	148	127	269	183	172	24.3	26.7	26.4	25.9	31.6
August	21	14	16	15	14	195	114	200	102	181	26.1	27.2	24.2	28.1	30.4
September	19	16	15	19	13	163	109	133	157	209	24.8	28.8	25.3	27.3	27.7
October	13	17	18	18	11	131	200	113	179	145	24.7	28.3	28.0	27.9	26.1
November	12	14	19	19	10	150	133	137	186	112	26.0	27.7	30.1	27.0	25.9
December	14	16	20	21	11	118	98	192	223	135	27.2	27.9	31.4	26.9	30.0
Total or average	190	175	200	210	180	1,860	1,720	1,910	2,100	1,600	25.4	27.3	28.6	27.1	28.6

TARO: Number of farms, acreage, marketings, price, and value, by islands, 1983-87

Year	Farms	Acreage in crop[1]			Marketings			Farm price			Value of sales
		Poi taro	Chinese taro	Total	Fresh	Processed	Total	Poi taro	Chinese taro	All	
	Number	Acres			1,000 pounds			Cents per pound			1,000 dollars
					STATE						
1983	155	350	20	370	346	5,094	5,440	22.2	25.0	22.6	1,229
1984	137	350	20	370	290	6,020	6,310	21.4	34.2	21.9	1,382
1985	155	340	60	400	590	6,270	6,860	21.6	37.9	23.0	1,578
1986	140	330	60	390	490	5,840	6,330	22.2	33.9	23.1	1,462
1987	**140**	**330**	**70**	**400**	**600**	**5,700**	**6,300**	**24.6**	**41.9**	**27.0**	**1,701**
					HAWAII						
1983	67	45	20	65	228	512	740	22.5	35.0	25.0	185
1984	57	45	20	65	180	615	795	23.4	34.2	25.8	205
1985	72	35	50	85	390	620	1,010	23.4	37.2	28.7	290
1986	65	35	50	85	400	440	840	22.6	34.2	28.1	236
1987	**68**	**45**	**65**	**110**	**540**	**740**	**1,280**	**28.8**	**42.0**	**37.2**	**476**
					KAUAI						
1983	54	215	[2]	215	39	3,411	3,450	22.1	[3]	22.1	762
1984	50	225	[2]	225	40	4,310	4,350	21.1	[3]	21.1	918
1985	48	210	[2]	210	60	4,720	4,780	21.4	[3]	21.6	1,032
1986	50	215	[2]	215	40	4,450	4,490	22.4	[3]	22.5	1,010
1987	**46**	**200**	[2]	**200**	**30**	**4,140**	**4,170**	**24.3**	[3]	**24.4**	**1,017**
					MAUI/MOLOKAI/OAHU[4]						
1983	34	90	[5]	90	79	1,171	1,250	22.6	[3]	22.6	282
1984	30	80	[5]	80	70	1,095	1,165	21.3	[3]	22.2	259
1985	35	95	10	105	140	930	1,070	21.4	40.5	23.9	256
1986	25	80	10	90	50	950	1,000	21.0	32.3	21.6	216
1987	**26**	**85**	**5**	**90**	**30**	**820**	**850**	**23.8**	**41.7**	**24.5**	**208**

[1] Survey conducted in November each year. Does not include acreage used primarily for leaf production.
[2] Kauai combined with Maui, Molokai, and Oahu to avoid disclosure of individual operations.
[3] Not shown separately but accounted for in State average.
[4] Oahu combined with Maui and Molokai to avoid disclosure of individual operations.
[5] Less than 5 acres.

TOMATOES

TOMATOES: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			STATE[1]		
1983	290	30.0	8,700	38.7	3,367
1984	280	27.5	7,700	40.3	3,103
1985	300	26.0	7,800	40.2	3,136
1986	240	28.0	6,700	41.0	2,747
1987	**250**	**28.0**	**7,000**	**42.6**	**2,982**
			HAWAII		
1983	125	41.5	5,190	39.8	2,066
1984	130	34.7	4,510	41.9	1,890
1985	140	33.2	4,650	41.8	1,944
1986	110	33.2	3,650	42.5	1,551
1987	**90**	**32.7**	**2,940**	**46.4**	**1,364**
			KAUAI		
1983	3	16.7	50	52.9	26
1984	5	22.0	110	54.8	60
1985	10	15.0	150	37.4	56
1986	15	16.7	250	37.6	94
1987	**8**	**14.4**	**115**	**50.9**	**59**
			MAUI/MOLOKAI		
1983	145	21.2	3,080	35.4	1,090
1984	125	21.0	2,620	35.1	920
1985	135	18.9	2,550	36.1	921
1986	105	23.3	2,450	37.7	924
1987	**135**	**24.4**	**3,300**	**37.3**	**1,231**
			OAHU		
1983	17	22.4	380	48.6	185
1984	20	23.0	460	50.7	233
1985	15	30.0	450	47.8	215
1986	10	35.0	350	50.9	178
1987	**17**	**37.9**	**645**	**50.8**	**328**

[1] Sum of island estimates may not add to State total due to rounding.

TOMATOES: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested[1]					Production[2]					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	43	56	46	58	53	585	878	750	718	636	45.5	35.1	37.7	47.6	42.3
February	45	41	42	50	52	748	901	808	671	651	42.1	37.3	40.8	39.1	44.3
March	45	58	49	52	50	808	873	748	866	708	44.5	38.6	42.8	37.3	43.5
April	49	54	52	43	45	783	736	747	747	710	45.9	41.9	47.2	39.1	40.4
May	56	41	52	43	38	911	603	640	597	774	42.7	42.4	42.0	41.7	40.9
June	48	43	44	39	38	766	684	608	480	643	35.2	40.9	39.5	41.1	42.0
July	43	42	38	31	32	564	557	686	397	472	33.2	38.9	37.5	39.4	40.2
August	46	43	38	24	28	675	465	567	356	423	34.9	43.6	35.6	39.4	38.4
September	50	34	40	29	26	727	427	493	342	397	33.0	44.0	34.1	38.0	41.9
October	50	28	48	39	30	643	376	686	415	413	33.8	44.1	34.9	39.0	39.6
November	42	30	42	46	32	652	493	414	439	457	35.6	46.9	40.4	47.0	44.8
December	53	43	48	51	32	838	707	653	672	716	35.5	39.0	47.2	42.8	49.5
Total or average	290	280	300	240	250	8,700	7,700	7,800	6,700	7,000	38.7	40.3	40.2	41.0	42.6

[1] Sum of monthly data exceeds total because harvest period longer than 1 month.
[2] Sum of monthly estimates may not add to annual total due to rounding.

WATERMELONS: Acreage, yield, production, price, and value, by islands, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds		Cents per pound	1,000 dollars
			STATE[1]		
1983	310	12.5	3,860	19.9	768
1984	400	15.2	6,090	18.5	1,127
1985	480	18.3	8,800	17.0	1,496
1986	620	23.1	14,300	12.6	1,802
1987	**740**	**18.6**	**13,800**	**11.9**	**1,642**
			HAWAII		
1983	15	8.0	120	20.9	25
1984	10	6.5	65	22.4	14
1985	5	8.0	40	22.8	9
1986	10	8.5	85	16.3	14
1987	**10**	**6.0**	**60**	**16.0**	**10**
			KAUAI		
1983	55	13.5	740	19.0	141
1984	45	16.9	760	19.2	146
1985	45	10.2	460	20.3	93
1986	30	10.7	320	16.0	51
1987	**25**	**8.0**	**200**	**19.7**	**39**
			MAUI/MOLOKAI		
1983	170	13.3	2,260	17.9	405
1984	270	16.8	4,525	17.5	792
1985	345	20.7	7,150	16.4	1,173
1986	460	25.9	11,915	12.0	1,430
1987	**575**	**19.9**	**11,470**	**11.2**	**1,285**
			OAHU		
1983	70	10.6	740	26.6	197
1984	75	9.9	740	23.7	175
1985	85	13.5	1,150	19.2	221
1986	120	16.5	1,980	15.5	307
1987	**130**	**15.9**	**2,070**	**14.9**	**308**

[1] Sum of island estimates may not add to State total due to rounding.

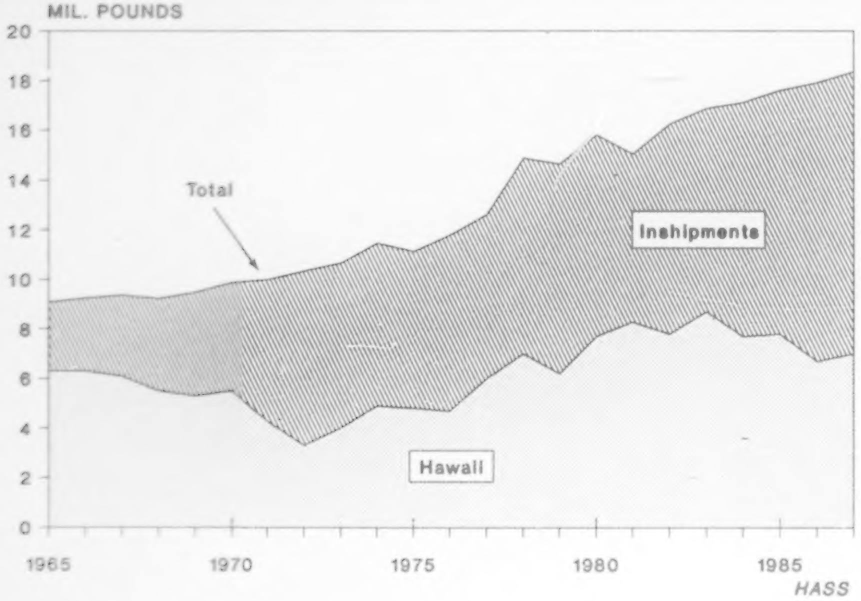
WATERMELONS: Acreage, production, and price, State of Hawaii, 1983-87

Month	Acreage harvested[1]					Production					Farm price				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	Acres					1,000 pounds					Cents per pound				
January	2	1	6	5	5	11	5	14	4	9	21.8	28.8	23.1	22.0	22.0
February	0	1	4	6	1	0	3	12	3	2	0	25.8	31.3	25.6	11.1
March	0	11	3	12	4	0	58	18	171	11	0	19.8	30.0	26.3	29.6
April	19	33	28	66	61	168	457	250	768	727	22.7	23.6	29.1	16.1	25.1
May	66	73	61	102	111	697	1,045	1,662	2,314	1,979	23.4	22.6	20.8	14.0	12.5
June	78	86	73	103	181	744	919	1,890	2,582	2,482	21.1	21.5	15.1	13.2	12.0
July	63	59	81	136	158	567	999	1,718	2,962	2,315	18.8	17.1	14.9	11.0	10.3
August	51	54	116	112	107	670	816	1,649	3,029	2,665	17.1	16.8	13.9	10.6	9.5
September	67	77	98	96	95	458	769	608	1,928	2,244	19.3	15.0	19.5	11.6	10.4
October	40	41	61	66	76	348	691	648	435	1,010	17.5	13.3	18.0	17.7	13.5
November	19	22	41	12	43	160	229	287	71	326	18.0	17.3	18.5	20.4	15.0
December	4	10	15	17	5	37	99	44	33	30	18.7	17.1	19.5	17.0	15.5
Total or average	310	400	480	620	740	3,860	6,090	8,800	14,300	13,800	19.9	18.5	17.0	12.6	11.9

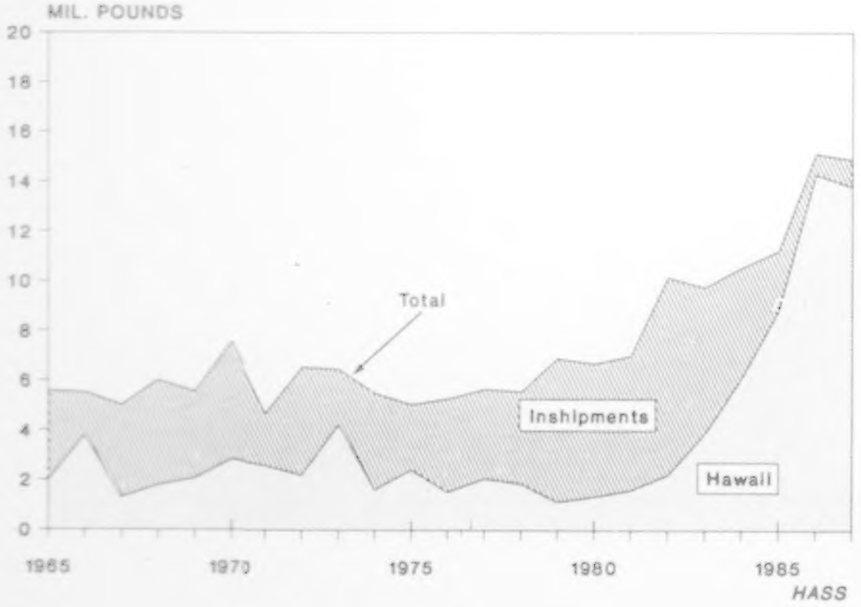
[1] Sum of monthly data exceeds total because harvest period longer than 1 month.

FRESH MARKET SUPPLY: Tomatoes and Watermelons

MARKET SUPPLY: Fresh Market Tomatoes,
State of Hawaii, 1965-87



MARKET SUPPLY: Fresh Market Watermelons,
State of Hawaii, 1965-87



WATERCRESS

WATERCRESS: Acreage, production, price, and value, State of Hawaii, 1983-87

Year	Acreage in crop	Production	Farm price	Value of sales
	Acres	1,000 pounds	Cents per pound	1,000 dollars
1983	30	1,300	83.4	1,084
1984	35	1,400	83.8	1,173
1985	35	1,530	79.2	1,212
1986	35	1,200	84.1	1,009
1987	**40**	**1,230**	**92.9**	**1,142**

PROCESSED CHINESE CABBAGE AND DAIKON

PROCESSED CHINESE CABBAGE AND DAIKON: Quantity processed, price, and value, State of Hawaii, 1983-87

Year	Chinese cabbage			Daikon		
	Quantity processed	Farm price	Value of sales	Quantity processed	Farm price	Value of sales
	1,000 pounds	Cents per pound	1,000 dollars	1,000 pounds	Cents per pound	1,000 dollars
1983	1,650	11.5	190	740	10.6	78
1984	1,390	13.5	188	610	11.6	71
1985	1,330	15.7	209	560	12.3	69
1986	1,390	19.2	267	570	12.3	70
1987	**1,300**	**19.5**	**254**	**570**	**12.2**	**70**

OTHER VEGETABLES

OTHER VEGETABLES: Acreage, yield, production, price, and value, State of Hawaii, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
BITTERMELON					
1983	20	13.0	260	66.8	174
1984	25	13.2	330	57.7	190
1985	20	10.5	210	78.0	164
1986	30	10.0	300	71.7	215
1987	**20**	**11.0**	**220**	**77.1**	**170**
BROCCOLI					
1983	70	9.7	680	36.6	249
1984	70	9.4	660	38.5	254
1985	120	8.0	960	40.0	384
1986	100	7.9	790	45.5	359
1987	**80**	**8.4**	**675**	**45.0**	**304**
BURDOCK					
1983	50	15.8	790	65.0	514
1984	50	16.4	820	63.9	524
1985	45	16.7	750	66.8	501
1986	30	17.0	510	78.0	398
1987	**30**	**19.3**	**580**	**87.4**	**507**
MUSTARD CABBAGE					
1983	170	9.7	1,650	30.5	503
1984	165	10.7	1,770	30.3	536
1985	160	9.5	1,520	32.4	492
1986	140	11.4	1,600	34.1	546
1987	**140**	**10.4**	**1,450**	**31.8**	**461**
CARROTS					
1983	12	12.5	150	22.5	34
1984	15	14.7	220	21.6	48
1985	15	13.3	200	20.8	42
1986	10	16.0	160	21.7	35
1987	**5**	**16.0**	**80**	**21.0**	**17**
CAULIFLOWER					
1983	25	15.0	375	36.0	135
1984	30	13.7	410	33.0	135
1985	60	14.2	850	38.1	324
1986	70	10.1	710	53.0	376
1987	**30**	**10.7**	**320**	**48.4**	**155**
DASHEEN					
1983	18	25.0	450	52.4	236
1984	12	20.0	240	52.5	126
1985	10	21.0	210	50.0	105
1986	10	20.0	200	64.3	129
1987	**8**	**19.4**	**155**	**65.0**	**101**

OTHER VEGETABLES: Acreage, yield, production, price, and value, State of Hawaii, 1983-87

Year	Acreage harvested	Yield per acre	Production	Farm price	Value of sales
	Acres	1,000 pounds	1,000 pounds	Cents per pound	1,000 dollars
			LOTUS ROOT		
1983	35	5.3	185	109.5	203
1984	30	6.0	180	115.0	207
1985	35	5.3	185	134.0	248
1986	35	4.3	150	132.0	198
1987	**35**	**4.1**	**145**	**128.0**	**186**
			PARSLEY		
1983	25	13.2	330	70.4	232
1984	30	13.8	415	78.1	324
1985	25	12.4	310	80.1	248
1986	25	12.8	320	82.2	263
1987	**25**	**12.4**	**310**	**82.6**	**256**
			CHINESE PEAS		
1983	15	5.3	80	196.1	157
1984	15	5.3	80	196.5	157
1985	15	5.3	80	196.6	157
1986	15	4.7	70	165.7	116
1987	**15**	**4.7**	**70**	**148.7**	**104**
			PUMPKINS		
1983	25	13.6	340	24.3	83
1984	30	11.0	330	25.5	84
1985	20	13.0	260	22.8	59
1986	15	13.3	200	23.2	46
1987	**10**	**13.5**	**135**	**23.0**	**31**
			RADISH		
1983	35	9.4	330	32.8	108
1984	35	8.6	300	32.4	97
1985	35	8.9	310	35.9	111
1986	20	10.3	205	35.3	72
1987	**30**	**10.7**	**320**	**37.4**	**120**
			ORIENTAL SQUASH (HYOTAN AND TOGAN)		
1983	40	13.9	555	21.9	122
1984	50	13.0	650	24.0	156
1985	35	14.0	490	26.3	129
1986	30	13.3	400	30.2	121
1987	**20**	**15.8**	**315**	**30.7**	**97**

FRESH MELONS: MARKET SUPPLY

MARKET SUPPLY: Fresh market melons, State of Hawaii, 1983-87

Commodity		1983	1984	1985	1986	1987	Hawaii market share 1987
		1,000 pounds					Percent
Cantaloupes:	Inshipments	4,717	5,056	5,893	5,881	**6,200**	
	Hawaii	[1]	[1]	--	[2]	[2]	2
Honeydew melons:	Inshipments	3,181	3,280	4,141	5,023	**5,492**	
	Hawaii	[1]	[1]	--	--	--	--
Watermelons:	Inshipments	5,910	4,466	2,424	831	**1,104**	
	Hawaii	3,860	6,090	8,800	14,300	**13,800**	**93**
Other melons:	Inshipments	329	442	402	546	**435**	
	Hawaii	10	15	0	[2]	[2]	2
Unspecified melons:	Inshipments[2]	395	287	304	574	**778**	
Total:	Inshipments	14,532	13,531	13,164	12,855	**14,009**	
	Hawaii	3,870	6,105	8,800	14,300	**13,800**	**50**
	All	18,402	19,636	21,964	27,155	**27,809**	

-- = Negligible.

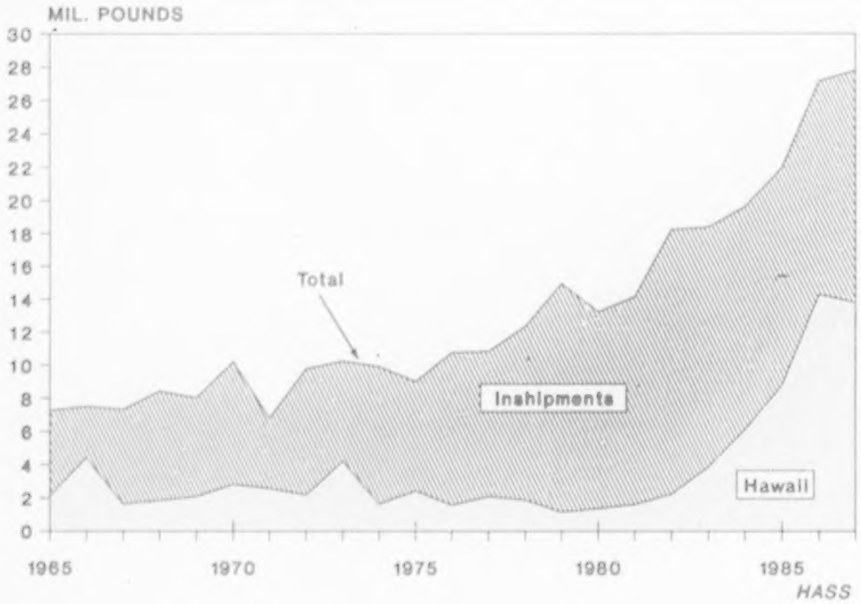
[1] Data included with other melons.

[2] Not shown separately and excluded from the Hawaii total to avoid disclosure of individual operations.

[3] Proration of shipments of unspecified mixed melons destined for outlying islands.

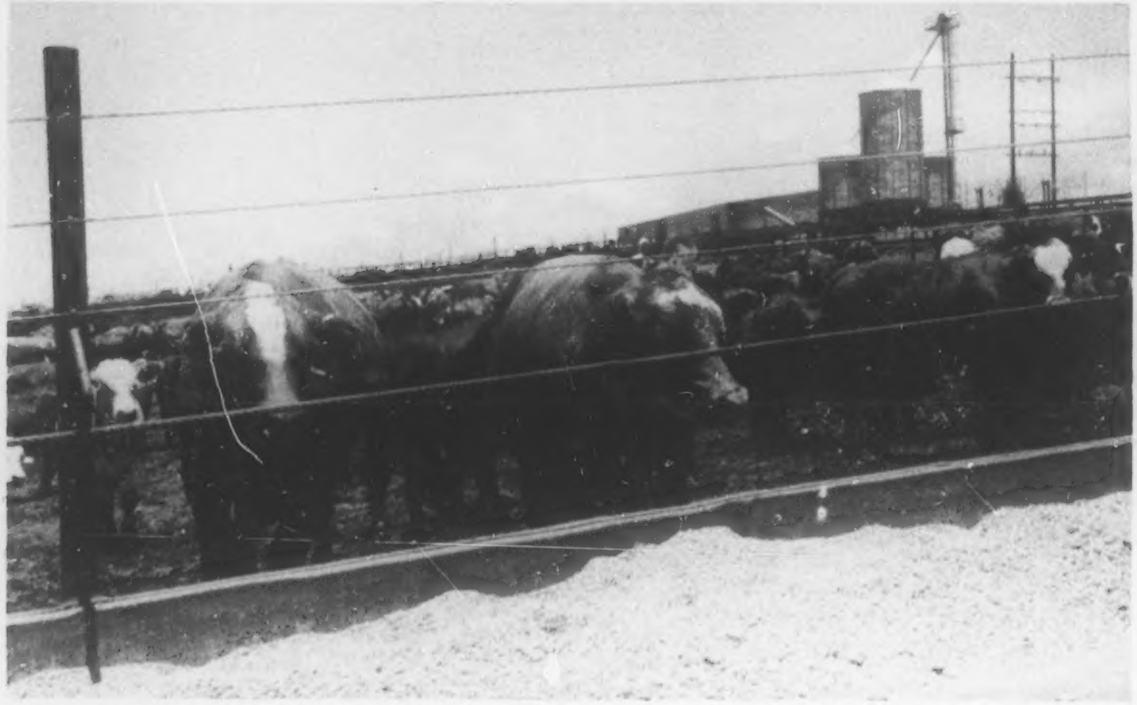
Source of inshipment data: Market News Service, Hawaii Department of Agriculture.

MARKET SUPPLY: Fresh Market Melons, State of Hawaii, 1965-87



HASS

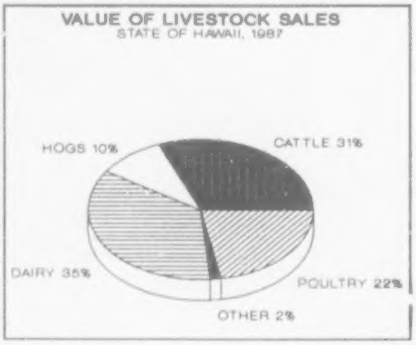
1987 LIVESTOCK SUMMARY



During 1987, cash receipts from livestock sales totaled $87.9 million, 5 percent more than 1986. Most of the increase from the previous year resulted from higher prices.

DAIRY

Repeating as the number one livestock enterprise in 1987 was the Dairy industry, with sales of **$31.2** million, surpassing last year's record of $30.6 million. Milk production during 1987 was 156 million pounds, unchanged from the 1986 level. A higher average return, $20.30 per hundred pounds of milk, accounted for all of the increase in revenue.



CATTLE

Receipts generated from the sale of Cattle and Calves in 1987 was **$27.4** million, compared with $24.6 million the previous year. Beef marketings increased from 62.3 million pounds in 1986 to 62.9 million in 1987. Prices ranchers received during the year averaged $43.50 per hundred pounds, $3.90 higher than 1986. The Statewide cattle and calves inventory on January 1, 1988 totaled 199,000 head, 4,000 above the previous year.

POULTRY

Revenue from the sales of Eggs, Broilers, and Chickens totaled **$19.4** million, $1.2 million more than during 1986. Leading the way were receipts from egg sales which totaled $14.3 million. Egg production declined from 227.0 million in 1986 to 223.3 million eggs this past year, but the average price farmers received increased 5.7 cents a dozen to 76.8 cents in 1987. Broiler sales recorded revenues of $4.9 million, 8 percent more than 1986. Increases in both marketings and prices accounted for the higher return. Sales of spent hens declined $1,000 from the 1986 level to $192,000 as the decline in marketings more than offset an increase in prices received.

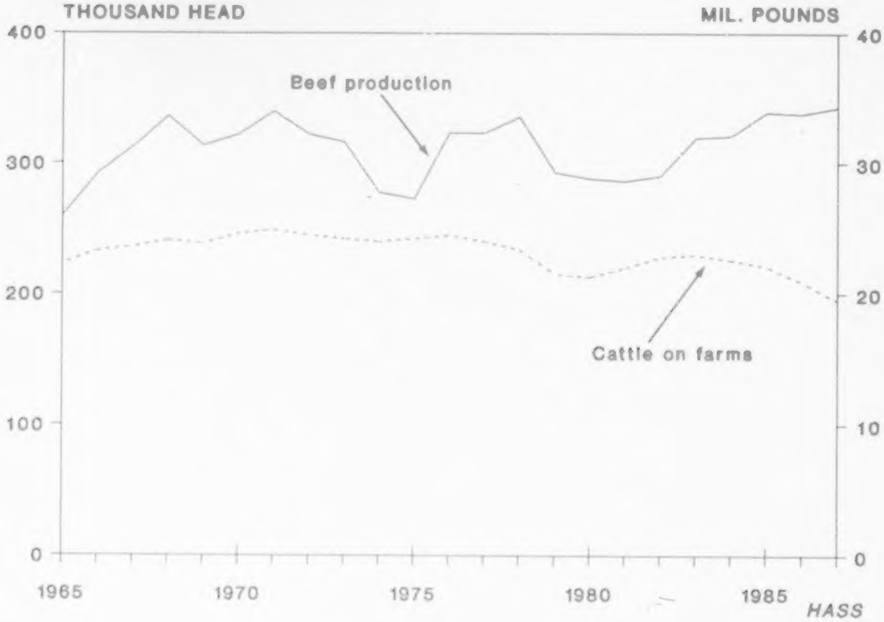
HOGS

Cash receipts from the sale of Hogs and Pigs during 1987 totaled **$8.5** million, down 3 percent from 1986. Declines in both marketings and the average price accounted for the producer's lower return. The inventory of hogs and pigs on December 1, 1987 declined 3,000 head to 47,000.

HONEY

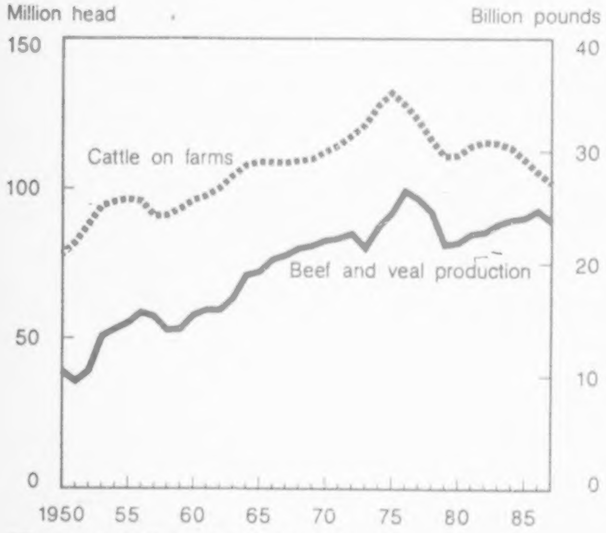
Honey and Beeswax sales totaled **$986,000** compared with $769,000 during 1986.

Cattle Numbers and Beef Production, State of Hawaii, 1965-87



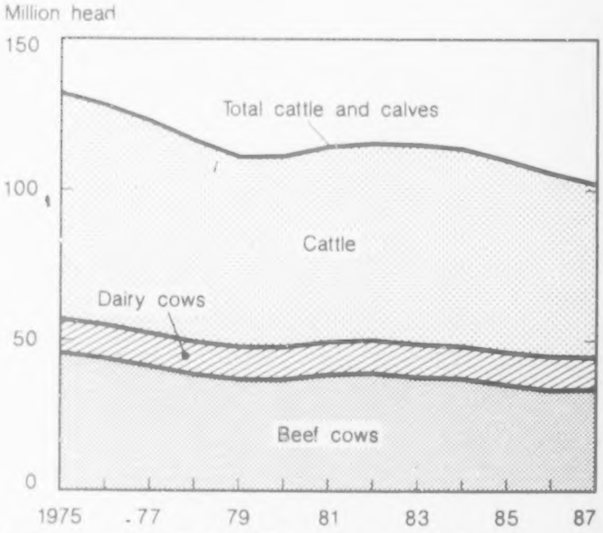
HASS

U.S. Cattle Numbers and Beef Production



1987 production forecast. Cattle and calves on farms January 1.

U.S. Cattle on Farms



Cattle on farms as of January 1. Beef cows are those that have calved.

USDA

CATTLE AND CALVES: January 1 inventory by sex classes and weight, by islands, 1984-88

Year	All cattle and calves	All cows and heifers that have calved			Heifers 500 pounds and over				Steers 500 lbs. and over	Bulls 500 lbs. and over	Steers, heifers, and bulls under 500 lbs.
		Total	Beef cows	Milk cows	Total	Beef cow replacements	Milk cow replacements	Other			
	1,000 head										
	STATE[1]										
1984......	226	93	81	12	45	20	7	18	26	7	55
1985......	221	95	83	12	41	16	6	19	23	6	56
1986......	209	92	81	11	39	14	5	20	20	6	52
1987......	195	80	68	12	42	20	5	17	23	5	45
1988	**199**	**85**	**73**	**12**	**39**	**15**	**5**	**19**	**22**	**5**	**48**
	HAWAII										
1984......	135.8	56.6	55.1	1.5	27.1	15.4	3.1	8.6	12.5	4.8	34.8
1985......	128.1	59.1	57.5	1.6	21.3	10.8	3.1	7.4	8.8	4.4	34.5
1986......	123.9	57.3	55.8	1.5	20.4	9.2	2.6	8.6	8.5	4.4	33.3
1987......	121.2	49.9	48.3	1.6	26.2	15.4	2.4	8.4	11.7	3.9	29.5
1988	**123.1**	**53.7**	**52.0**	**1.7**	**22.4**	**10.7**	**2.2**	**9.5**	**11.7**	**3.4**	**31.9**
	KAUAI/NIIHAU										
1984......	16.0	6.3	5.8	.5	2.9	1.4	.2	1.3	2.2	.4	4.2
1985......	14.4	5.7	5.2	.5	2.6	1.0	.3	1.3	2.0	.3	3.8
1986......	15.0	5.9	5.4	.5	3.0	1.3	.3	1.4	2.0	.4	3.7
1987......	14.1	5.7	5.2	.5	2.8	1.4	.2	1.2	1.9	.4	3.3
1988	**13.9**	**6.1**	**5.7**	**.4**	**2.5**	**1.2**	**.2**	**1.1**	**1.5**	**.4**	**3.4**
	MAUI										
1984......	35.0	15.9	14.9	1.0	5.7	2.3	.6	2.8	3.4	1.3	8.7
1985......	33.9	15.1	14.1	1.0	5.7	2.4	.5	2.8	3.0	1.0	9.1
1986......	31.7	14.6	13.6	1.0	5.0	2.2	.3	2.5	2.8	.9	8.4
1987......	28.5	13.2	12.2	1.0	5.0	2.5	.2	2.3	2.6	.7	7.0
1988	**27.8**	**12.2**	**11.2**	**1.0**	**5.3**	**2.6**	**.2**	**2.5**	**2.0**	**.7**	**7.6**
	MOLOKAI/LANAI										
1984......	5.9	3.5	3.5	0	.4	.3	0	.1	.2	.2	1.6
1985......	7.4	3.8	3.8	0	1.0	.7	0	.3	.5	.2	1.9
1986......	5.4	3.5	3.5	0	.4	.1	0	.3	.4	.1	1.0
1987......	0	0	0	0	0	0	0	0	0	0	0
1988	**.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**.7**	**0**	**0**
	OAHU										
1984......	33.3	11.0	1.6	9.4	8.7	.3	3.3	5.1	8.1	.2	5.3
1985......	37.2	11.4	2.5	8.9	10.4	.6	2.3	7.5	8.7	.4	6.3
1986......	33.0	10.8	2.5	8.3	10.1	.8	2.2	7.1	6.3	.3	5.5
1987......	31.2	11.2	2.6	8.6	7.9	.6	2.1	5.2	6.6	.3	5.2
1988	**33.5**	**12.5**	**3.7**	**8.8**	**9.1**	**.7**	**2.4**	**6.0**	**6.0**	**.4**	**5.5**

[1] State totals may not add due to rounding.

CATTLE: Number of operations, by size group, by islands, 1983-87[1]

Year	Hawaii		Kauai/Niihau		Maui		Molokai		Oahu		State	
	Total	20 + cattle	Total	20 + cattle	Total	20 + cattle	Total	20 + cattle	Total	20 + cattle	Total	20 + cattle
	Number											
1983.................	450	215	180	75	205	80	30	10	85	50	950	430
1984.................	395	205	165	70	190	80	25	10	75	45	850	410
1985.................	400	180	165	75	170	75	35	15	80	45	850	390
1986.................	365	170	160	60	165	70	35	10	75	40	800	350
1987	**380**	**175**	**170**	**60**	**175**	**70**	**5**	**5**	**70**	**40**	**800**	**350**

[1] Difference between "Total" and "20 +" is operations having 1-19 head of cattle (dairy and/or beef).

CATTLE

CATTLE AND CALVES: Number sold, pounds, price, and value, by islands, 1983-87

Year	Number sold[1]	Pounds sold (live weight)[2]	Farm price (live weight)[3]	Value of sales
	1,000 head	1,000 pounds	Dollars per hundredweight	1,000 dollars
			STATE	
1983	60	59,100	49.60	29,308
1984	65	60,600	56.40	28,101
1985	74	65,160	40.90	26,632
1986	67	62,300	39.60	24,645
1987	**62**	**62,940**	**43.50**	**27,401**
			HAWAII	
1983	38.0	38,188	49.30	18,831
1984	43.0	39,802	45.50	18,126
1985	49.5	42,567	39.60	16,870
1986	42.1	41,244	39.70	16,385
1987	**45.5**	**47,165**	**43.50**	**20,535**
			KAUAI/NIIHAU	
1983	4.5	4,143	51.60	2,139
1984	4.3	3,988	51.20	2,041
1985	3.8	3,858	48.20	1,860
1986	4.1	3,844	45.10	1,734
1987	**3.6**	**3,502**	**46.40**	**1,625**
			MAUI	
1983	11.8	10,850	52.10	5,655
1984	12.0	11,134	48.20	5,364
1985	15.2	13,541	43.70	5,920
1986	13.7	11,250	41.50	4,671
1987	**10.6**	**9,587**	**45.00**	**4,317**
			MOLOKAI	
1983	2.3	2,446	50.60	1,238
1984	3.0	3,056	49.90	1,525
1985	2.5	2,307	39.00	900
1986	5.2	4,101	30.60	1,255
1987	**0**	**0**	**0**	**0**
			OAHU	
1983	3.4	3,473	41.60	1,445
1984	2.7	2,620	39.90	1,045
1985	3.0	2,887	37.50	1,082
1986	1.9	1,861	32.20	600
1987	**2.3**	**2,686**	**34.40**	**924**

[1] Includes custom slaughter for home use on farms where produced and out-of-State sales of cattle and calves; but, excludes interfarm sales. State totals may not add due to rounding.

[2] Excludes custom slaughter for use on farms where produced.

[3] Prices are equivalent delivered slaughterhouse for sales on island of production and delivered shipper's dock for interisland and out-of-State sales.

CATTLE: Number of feedlot slaughter cattle sold, pounds, price, and value, by islands, 1983-87[1]

Year	Number sold[2]	Pounds sold (live weight)[3]	Farm price (live weight)	Value of sales
	1,000 head	1,000 pounds	Dollars per hundredweight	1,000 dollars
			STATE	
1983	31.9	35,408	54.90	19,439
1984	33.8	36,245	51.80	18,781
1985	36.5	37,297	45.60	17,007
1986	33.6	35,463	44.50	15,781
1987	**39.7**	**43,211**	**47.40**	**20,482**
			HAWAII	
1983	22.8	25,669	54.60	14,015
1984	23.3	25,381	51.30	13,017
1985	25.2	26,022	44.70	11,632
1986	26.0	28,055	43.80	12,288
1987	**31.9**	**35,413**	**47.00**	**16,644**
			KAUAI/NIIHAU	
1983	.9	992	52.50	521
1984	1.0	1,098	49.30	541
1985	1.0	1,043	44.10	460
1986	.8	840	43.10	362
1987	**1.1**	**1,193**	**46.60**	**556**
			MAUI	
1983	5.8	5,871	57.50	3,376
1984	6.4	6,406	54.50	3,493
1985	8.3	8,114	48.90	3,968
1986	6.3	6,043	48.00	2,901
1987	**6.4**	**6,221**	**49.80**	**3,098**
			MOLOKAI	
1983	1.6	1,828	52.80	965
1984	2.4	2,614	51.50	1,346
1985	1.1	1,199	42.70	512
1986	.4	377	43.20	163
1987	0	0	0	0
			OAHU	
1983	.8	1,048	53.60	562
1984	.7	746	51.50	384
1985	.9	919	47.30	435
1986	.1	148	45.30	67
1987	**.3**	**384**	**47.90**	**184**

[1] Animals fattened on grain or other concentrates which produce a carcass expected to grade good or better.

[2] Includes custom slaughter for home use on farms where produced but excludes interfarm sales.

[3] Excludes custom slaughter for use on farms where produced.

CATTLE

CATTLE: Number of range and other slaughter cattle sold, pounds, price, and value, by islands, 1983-87[1]

Year	Number sold[2]	Pounds sold (live weight)[3]	Farm price (live weight)	Value of sales
	1,000 head	1,000 pounds	Dollars per hundredweight	1,000 dollars
			STATE	
1983	28.1	23,692	41.70	9,869
1984	31.2	24,355	38.30	9,320
1985	37.5	27,863	34.50	9,625
1986	33.4	26,837	33.00	8,864
1987	**22.3**	**19,729**	**35.10**	**6,919**
			HAWAII	
1983	15.2	12,519	38.50	4,816
1984	19.7	14,421	35.40	5,109
1985	24.3	16,545	31.70	5,238
1986	16.1	13,189	31.10	4,097
1987	**13.6**	**11,752**	**33.10**	**3,891**
			KAUAI/NIIHAU	
1983	3.6	3,151	51.30	1,618
1984	3.3	2,890	51.90	1,500
1985	2.8	2,815	49.70	1,400
1986	3.3	3,004	45.70	1,372
1987	**2.5**	**2,309**	**46.30**	**1,069**
			MAUI	
1983	6.0	4,979	45.80	2,279
1984	5.6	4,728	39.60	1,871
1985	6.9	5,427	36.00	[4]1,952
1986	7.4	5,207	34.00	1,770
1987	**4.2**	**3,366**	**36.20**	**1,219**
			MOLOKAI	
1983	.7	618	44.20	273
1984	.6	442	40.50	179
1985	1.4	1,108	35.00	388
1986	4.8	3,724	29.30	1,092
1987	**0**	**0**	**0**	**0**
			OAHU	
1983	2.6	2,425	36.40	883
1984	2.0	1,874	35.30	661
1985	2.1	1,968	32.90	647
1986	1.8	1,713	31.10	533
1987	**2.0**	**2,302**	**32.10**	**740**

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[1] Animals fattened primarily on grass and other roughage; may include some supplementary feeding of grain. Dairy cattle; calves included.
[2] Includes custom slaughter for home use on farms where produced but excludes interfarm sales.
[3] Excludes custom slaughter for use on farms where produced.
[4] Revised.

CATTLE: Commercial slaughter and marketings, by class, State of Hawaii, 1983-87

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average
	Commercial slaughter[1]												
	Number -- 1,000 head[2]												
1983	4.5	4.5	5.5	4.7	4.8	4.8	4.5	5.1	4.5	4.2	4.3	4.7	56.0
1984	4.9	4.8	4.5	4.5	4.4	4.8	5.8	5.1	4.0	5.1	4.7	4.9	57.6
1985	5.2	4.6	5.0	5.0	6.2	5.4	6.5	5.0	4.7	5.8	5.3	5.8	64.6
1986	6.4	5.0	5.6	4.9	4.8	4.6	5.8	5.1	4.7	5.1	4.6	5.3	62.0
1987	**4.3**	**5.0**	**5.7**	**4.8**	**5.0**	**5.0**	**4.8**	**5.0**	**5.1**	**5.2**	**4.7**	**5.3**	**60.0**
	Dressed weight -- 1,000 pounds												
1983	2,488	2,490	3,060	2,584	2,662	2,610	2,441	2,895	2,573	2,408	2,419	2,651	31,280
1984	2,721	2,692	2,536	2,475	2,393	2,608	3,072	2,783	2,137	2,656	2,458	2,624	31,160
1985	2,727	2,425	2,574	2,578	3,264	2,897	3,373	2,477	2,374	3,057	2,740	2,975	33,461
1986	3,316	2,570	2,885	2,558	2,463	2,399	3,058	2,786	2,646	2,757	2,574	2,900	32,912
1987	**2,419**	**2,785**	**3,297**	**2,672**	**2,737**	**2,799**	**2,777**	**2,938**	**2,938**	**2,952**	**2,714**	**2,959**	**33,987**
	Marketings[3]												
	Feedlot steers and heifers, dressed weight -- 1,000 pounds												
1983	1,560	1,617	1,825	1,449	1,843	1,599	1,577	1,878	1,547	1,469	1,480	1,595	19,439
1984	2,017	1,761	1,516	1,449	1,477	1,676	2,058	1,596	1,170	1,571	1,602	2,005	19,898
1985	1,818	1,479	1,581	1,394	2,173	1,806	2,109	1,235	1,281	2,000	1,692	1,908	20,476
1986	2,189	1,656	1,397	1,463	1,108	1,240	1,735	1,577	1,705	1,746	1,711	1,942	19,469
1987	**1,631**	**1,804**	**2,285**	**1,778**	**1,886**	**1,980**	**2,012**	**2,130**	**2,015**	**2,089**	**1,953**	**2,160**	**23,723**
	Range steers and heifers, dressed weight -- 1,000 pounds												
1983	562	515	639	440	463	545	417	523	499	491	493	631	6,218
1984	530	407	433	527	408	400	506	534	462	528	402	467	5,604
1985	464	500	393	478	414	500	572	568	430	365	407	505	5,596
1986	451	293	601	447	464	430	586	422	447	461	387	401	5,490
1987	**268**	**317**	**334**	**301**	**299**	**300**	**265**	**351**	**296**	**308**	**290**	**276**	**3,605**
	Cows, dressed weight -- 1,000 pounds												
1983	341	330	534	553	299	443	413	453	452	416	400	430	5,064
1984	465	446	438	407	423	439	515	485	415	514	448	447	5,442
1985	401	403	466	598	592	526	605	591	576	561	583	552	6,454
1986	646	613	821	591	851	690	720	667	511	556	478	565	7,709
1987	**493**	**556**	**597**	**500**	**486**	**375**	**417**	**388**	**571**	**494**	**428**	**474**	**5,779**
	Bulls, dressed weight -- 1,000 pounds												
1983	83	87	121	201	116	82	93	100	134	91	104	52	1,264
1984	90	121	124	104	100	101	118	116	83	90	62	63	1,172
1985	83	82	173	147	124	104	126	122	126	170	96	49	1,402
1986	101	79	137	128	111	110	88	91	54	65	69	63	1,096
1987	**55**	**136**	**110**	**122**	**95**	**173**	**112**	**98**	**85**	**90**	**73**	**79**	**1,228**

[1] Includes custom slaughter for home use. To convert dressed weight to live weight, divide dressed weight by 0.549 or multiply by a factor of 1.8215.
[2] Sum of monthly estimates may not add to annual total due to rounding.
[3] Excludes custom slaughter for home use and calves shipped out-of-State, but includes onfarm sales.

CATTLE

CATTLE: Farm price, by class, State of Hawaii, 1983-87[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average
					Feedlot steers and heifers, dressed weight – Cents per pound								
1983......	98.5	98.0	103.5	109.5	107.5	105.5	102.5	98.0	93.5	94.0	92.5	95.5	100.0
1984......	98.5	99.5	98.5	99.5	97.0	94.5	94.0	94.0	93.5	90.5	88.0	89.5	95.0
1985......	87.5	88.0	88.5	88.0	85.5	87.5	80.0	77.0	72.5	79.5	82.5	85.5	83.5
1986......	85.0	78.0	75.5	78.5	79.0	77.0	77.5	81.0	82.0	81.5	85.5	86.5	81.0
1987	**84.0**	**85.0**	**84.5**	**89.0**	**90.0**	**89.5**	**87.5**	**85.5**	**84.0**	**85.0**	**84.5**	**85.5**	**86.0**
					Range steers and heifers, dressed weight – Cents per pound								
1983......	86.0	86.0	84.5	88.0	87.5	86.5	84.5	85.5	86.5	85.0	87.0	87.0	86.0
1984......	80.5	80.0	78.5	75.5	77.0	83.0	80.0	82.0	80.0	79.5	78.5	81.5	79.5
1985......	76.0	78.5	78.5	73.0	77.5	74.0	72.0	70.5	69.5	74.0	71.0	71.0	73.5
1986......	74.0	73.5	69.5	70.5	68.0	67.0	65.0	66.0	66.5	70.5	67.0	72.5	69.0
1987	**76.0**	**74.0**	**75.0**	**77.0**	**79.5**	**75.5**	**76.0**	**76.5**	**77.5**	**77.5**	**76.5**	**77.5**	**76.5**
					Cows, dressed weight – Cents per pound								
1983......	66.0	65.5	65.0	65.0	64.0	66.0	65.5	63.5	62.0	61.5	62.0	61.5	64.0
1984......	64.0	64.5	61.0	60.5	58.0	60.5	59.0	57.0	61.0	52.5	55.5	55.5	59.0
1985......	56.0	57.0	55.5	54.5	53.5	57.0	54.5	57.0	49.5	47.5	47.5	49.5	53.0
1986......	50.5	49.5	51.5	52.0	52.5	55.5	51.0	49.0	50.0	51.0	50.5	52.5	51.5
1987	**53.5**	**55.5**	**54.5**	**55.5**	**54.0**	**54.0**	**56.0**	**56.0**	**56.0**	**58.5**	**58.5**	**57.0**	**55.5**
					Bulls, dressed weight – Cents per pound								
1983......	73.0	74.0	74.0	73.0	73.0	75.5	73.5	72.0	72.0	73.0	71.5	73.0	73.0
1984......	71.5	71.5	71.0	69.5	66.0	67.0	66.5	64.5	66.0	63.5	61.0	64.5	67.5
1985......	64.5	63.0	63.0	63.5	63.5	64.0	62.5	59.5	57.5	57.5	55.5	57.0	61.0
1986......	55.0	61.0	58.5	57.5	62.5	64.5	62.5	58.0	59.0	59.5	62.0	61.0	60.0
1987	**59.5**	**61.0**	**58.0**	**61.0**	**61.5**	**62.0**	**65.0**	**62.5**	**62.0**	**65.0**	**70.5**	**62.0**	**62.5**
					All cattle, dressed weight – Cents per pound								
1983......	90.5	90.5	92.0	93.5	98.0	94.0	92.5	89.5	86.0	86.0	85.5	87.5	90.5
1984......	88.5	90.0	87.5	87.0	85.5	86.0	85.0	84.0	83.5	80.5	80.0	82.0	85.0
1985......	80.5	80.0	79.0	76.5	78.0	78.5	73.5	70.0	65.5	72.0	72.5	76.0	75.5
1976......	76.5	71.0	67.0	70.5	67.5	69.0	69.0	70.5	73.0	73.5	76.5	77.0	72.0
1987	**76.5**	**77.0**	**77.0**	**80.0**	**82.0**	**82.0**	**81.0**	**80.0**	**77.5**	**79.5**	**79.5**	**79.5**	**79.5**

[1] Prices are for commercial slaughter cattle

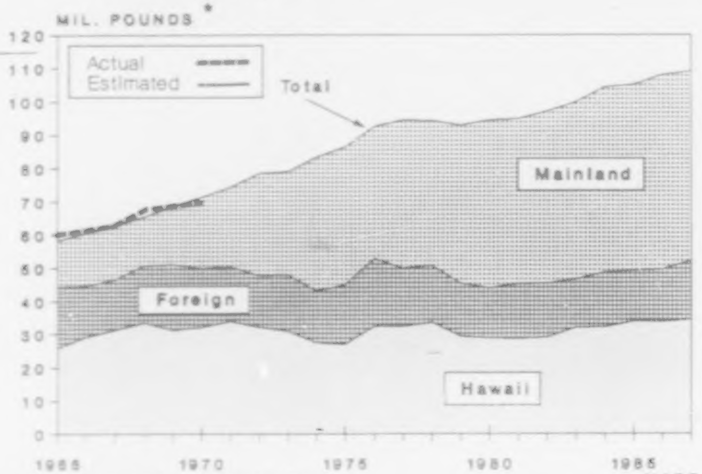
CATTLE AND CALVES: Inventory and disposition, State of Hawaii, 1983-87

Year	Inventory beginning January 1	Calf crop	Inshipments	Marketings	Farm slaughter	Deaths	Inventory January 1 following year
				1,000 head			
1983......	230	70	*	60	2	12	226
1984......	226	73	*	65	1	12	221
1985......	221	71	1	74	1	9	209
1986......	209	64	*	67	1	10	195
1987	**195**	**71**	*	**62**	*	**5**	**199**

* = Less than 50

BEEF AND VEAL, PORK: MARKET SUPPLY

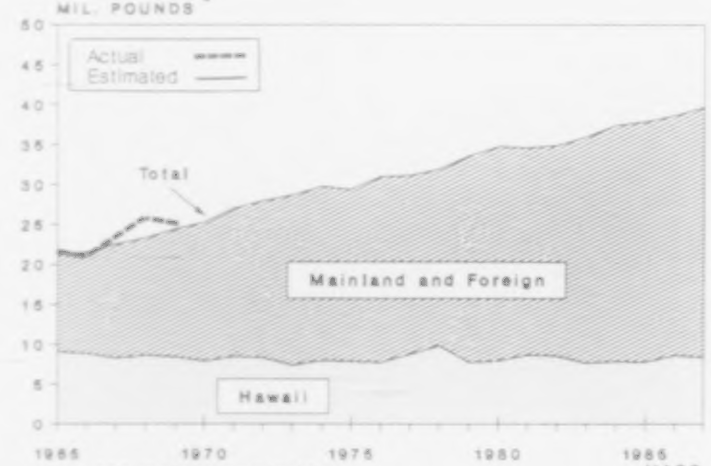
MARKET SUPPLY: Beef and Veal,
State of Hawaii, 1965-87



*Carcass-weight equivalent

HASS

MARKET SUPPLY: Pork,
State of Hawaii, 1965-87



*Carcass-weight equivalent

HASS

MARKET SUPPLY: Beef and veal, pork, State of Hawaii, 1978-87

Year	Beef and veal				Pork			
	Mainland	Foreign	Hawaii[1]	Total[2]	Mainland	Foreign	Hawaii	Total[2]
	1,000 pounds (carcass weight equivalent)							
1978	43,553	17,146	33,544	94,243	22,076	0	9,869	31,945
1979	47,453	16,030	29,325	92,808	25,796	45	7,785	33,626
1980	50,348	15,202	28,809	94,359	26,685	133	8,012	34,830
1981	49,622	16,504	28,666	94,792	25,827	97	8,708	34,632
1982	51,709	16,273	29,048	97,030	26,392	27	8,557	34,976
1983	53,259	14,555	31,985	99,799	27,505	802	7,693	36,000
1984	55,724	16,548	32,116	104,388	28,739	875	7,878	37,492
1985	55,893	15,263	33,928	105,084	28,333	1,735	7,859	37,927
1986	58,519	15,764	33,764	108,047	28,022	2,021	8,643	38,686
1987	**56,952**	**17,728**	**34,335**	**109,015**	**29,962**	**1,285**	**8,431**	**39,678**

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[1] Excludes slaughter cattle and calves shipped out-of-State.

[2] After 1971 total supply was estimated and mainland inshipments derived. See page 100 for detailed explanation of the estimating procedure.

MILK

MILK: Number of operations, number of milk cows, production, sales, price, and value, by islands, 1983-87

Year	Operations[1]		Annual average milk cows	Milk per cow	Production[2]	Sold[2]	Average price	Value of sales
	Total	10 + milk cows						
	Number			Pounds	Million pounds		Dollars per hundredweight	1,000 dollars
	STATE							
1983	90	23	12,500	11,920	149.0	143.7	20.09	28,869
1984	90	22	12,100	12,231	148.0	146.0	20.06	29,288
1985	90	20	11,300	12,566	142.0	139.8	20.25	28,310
1986	90	20	11,500	13,565	156.0	153.1	19.99	30,605
1987	**90**	**19**	**11,600**	**13,448**	**156.0**	**153.7**	**20.30**	**31,201**
	HAWAII/KAUAI/MAUI[3]							
1983	67	7	3,100	10,840	33.6	31.5	20.25	6,373
1984	69	6	3,000	11,835	35.5	33.8	20.13	6,803
1985	70	6	3,000	11,565	34.7	32.8	20.12	6,600
1986	70	6	3,100	12,645	39.2	36.6	19.80	7,247
1987	**70**	**6**	**3,200**	**12,595**	**40.3**	**38.1**	**19.18**	**7,306**
	OAHU							
1983	23	16	9,400	12,275	115.4	112.2	20.05	22,496
1984	21	16	9,100	12,365	112.5	112.2	20.04	22,485
1985	20	14	8,300	12,930	107.3	107.0	20.29	21,710
1986	20	14	8,400	13,905	116.8	116.5	20.05	23,358
1987	**20**	**13**	**8,400**	**13,775**	**115.7**	**115.6**	**20.67**	**23,895**

[1] At end of year. Difference between "Total" and "10 +" is operations having 1-9 milk cows.

[2] Difference between "Production" and "Sold" is milk used on farms for human consumption, fed to calves or other uses.

[3] Kauai and Maui combined with Hawaii to avoid disclosure of individual operations.

MILK-FEED RATIO, State of Hawaii, 1983-87[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
	Pounds											
1983	1.74	1.77	1.76	1.69	1.64	1.52	1.52	1.56	1.66	1.67	1.64	1.57
1984	1.57	1.63	1.59	1.52	1.61	1.62	1.50	1.50	1.76	1.81	1.72	1.71
1985	1.76	1.75	1.77	1.72	1.73	1.68	1.77	1.80	1.90	1.90	1.84	1.89
1986	1.84	1.88	NA	1.82	NA	NA	1.78	NA	NA	2.02	NA	NA
1987	**2.00**	**NA**	**NA**	**1.91**	**NA**	**NA**	**2.06**	**NA**	**NA**	**2.05**	**NA**	**NA**

NA = Not available. Beginning February 1986, prices paid for feed quarterly only.

[1] Pounds of 20-percent dairy feed equal in value to 1 pound of whole milk.

MILK

MILK: Number of cows, milk production, and price, State of Hawaii, 1983-87

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average
	Average number of milk cows on hand during month -- 1,000 head												
1983	12.5	12.5	12.5	12.5	12.6	12.6	12.6	12.4	12.4	12.5	12.4	12.4	12.5
1984	12.3	12.3	12.3	12.2	12.1	12.0	11.9	12.0	12.1	12.0	12.1	12.0	12.1
1985	11.8	11.7	11.6	11.4	11.1	11.1	11.1	11.1	11.0	11.0	11.2	11.3	11.3
1986	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.7	11.8	11.8	11.9	11.5
1987	**11.9**	**11.8**	**11.9**	**11.7**	**11.5**	**11.3**	**11.2**	**11.3**	**11.5**	**11.7**	**11.7**	**11.8**	**11.6**
	Average monthly production per all cows in herd -- Pounds												
1983	975	920	1,050	1,015	1,055	1,000	1,025	1,010	960	960	945	1,015	11,920
1984	1,050	990	1,075	1,065	1,115	1,050	1,060	1,035	925	935	940	985	12,231
1985	1,025	955	1,080	1,070	1,135	1,065	1,080	1,025	990	1,045	1,020	1,095	12,566
1986	1,150	1,080	1,210	1,200	1,230	1,165	1,165	1,095	1,015	1,060	1,040	1,120	13,565
1987	**1,135**	**1,075**	**1,195**	**1,190**	**1,225**	**1,185**	**1,150**	**1,105**	**1,015**	**1,015**	**1,035**	**1,110**	**13,448**
	Milk production -- Million pounds												
1983	12.2	11.5	13.1	12.7	13.3	12.6	12.9	12.5	11.9	12.0	11.7	12.6	149
1984	12.9	12.2	13.2	13.0	13.5	12.6	12.6	12.4	11.2	11.2	11.4	11.8	148
1985	12.1	11.2	12.5	12.2	12.6	11.8	12.0	11.4	10.9	11.5	11.4	12.4	142
1986	13.1	12.3	13.8	13.7	14.0	13.3	13.3	12.5	11.9	12.5	12.3	13.3	156
1987	**13.5**	**12.7**	**14.2**	**13.9**	**14.1**	**13.4**	**12.9**	**12.5**	**11.7**	**11.9**	**12.1**	**13.1**	**156**
	Average price for milk sold to plants -- Dollars per hundredweight												
1983	20.92	20.75	20.67	20.26	20.10	18.66	18.57	19.05	20.69	20.88	20.86	19.96	20.09
1984	20.83	20.78	20.27	19.80	19.58	19.79	19.41	18.78	20.67	20.79	20.16	20.05	20.06
1985	20.28	20.52	20.30	20.23	19.95	18.89	19.89	20.27	20.90	20.86	20.74	20.29	20.25
1986	20.25	20.22	20.19	19.61	19.75	18.75	19.17	20.12	20.71	20.74	20.67	19.91	19.99
1987	**20.52**	**20.21**	**19.77**	**19.59**	**19.73**	**19.14**	**20.55**	**20.61**	**21.01**	**21.02**	**21.01**	**20.85**	**20.30**

HONEY

HONEY: Number of operations, colonies, honey and beeswax production, price, and value, State of Hawaii, 1983-87

Year	Operations	Number of colonies	Yield per colony (honey)	Production		Average price[1]		Value of production	
				Honey (extracted)	Beeswax	Honey (extracted)	Beeswax	Honey	Beeswax
	Number	Thousands	Pounds	------- 1,000 pounds -------		---- Cents per pound ----		---- 1,000 dollars ----	
1983	27	9	145	1,305	21	58.1	230.0	758	48
1984	25	9	121	1,089	17	56.1	195.0	611	33
1985	22	9	132	1,188	18	62.9	190.0	747	34
1986	20	9	147	1,323	18	56.0	155.0	741	28
1987	**14**	**9**	**190**	**1,710**	**19**	**56.0**	**145.0**	**958**	**28**

[1] Average of unprocessed bulk and processed packaged honey sold at wholesale and processed packaged honey sold at retail by farmers.

HOGS

HOGS AND PIGS: December 1 inventory by classes and weight, by islands, 1983-87

Year	All hogs and pigs	Breeding	Market				
			Total	Under 60 lbs.	60-119 lbs.	120-179 lbs.	180 lbs. and over
				1,000 head			
				STATE[1]			
1983	48	7	41	19	11	8	3
1984	47	7	40	18	11	8	3
1985	55	9	46	21	13	9	3
1986	50	8	42	19	11	8	4
1987	**47**	**7**	**40**	**16**	**12**	**8**	**4**
				HAWAII			
1983	3.2	.5	2.7	1.2	1.0	.4	.1
1984	3.4	.6	2.8	1.6	.5	.5	.2
1985	4.8	.8	4.0	2.0	1.1	.8	.1
1986	4.9	.8	4.1	1.9	1.0	.9	.3
1987	**4.4**	**.7**	**3.7**	**1.6**	**1.1**	**.7**	**.3**
				KAUAI			
1983	3.5	.6	2.9	1.6	.9	.3	.1
1984	3.9	.7	3.2	1.6	.7	.8	.1
1985	5.4	.9	4.5	2.0	1.3	.9	.3
1986	4.8	.8	4.0	1.7	1.4	.7	.2
1987	**4.6**	**.7**	**3.9**	**1.6**	**.9**	**.8**	**.6**
				MAUI			
1983	8.7	1.3	7.4	3.3	2.2	1.4	.5
1984	7.5	1.1	6.4	2.6	1.8	1.4	.6
1985	10.2	1.6	8.6	3.8	2.3	1.6	.9
1986	9.2	1.1	8.1	3.8	2.0	1.5	.8
1987	**8.8**	**1.2**	**7.6**	**3.0**	**2.4**	**1.7**	**.5**
				MOLOKAI/LANAI			
1983	.9	.2	.7	.5	.1	.1	*
1984	.7	.1	.6	.2	.2	.1	.1
1985	1.0	.2	.8	.4	.2	.1	.1
1986	.7	.1	.6	.3	.2	*	.1
1987	**.7**	**.1**	**.6**	**.3**	**.1**	**.1**	**.1**
				OAHU			
1983	31.7	4.4	27.3	12.3	7.2	5.7	2.1
1984	31.5	4.5	27.0	12.0	7.4	5.2	2.4
1985	33.6	5.2	28.4	12.9	8.2	5.5	1.8
1986	30.4	4.8	25.6	11.6	6.6	4.9	2.5
1987	**28.5**	**4.3**	**24.2**	**9.8**	**7.1**	**5.0**	**2.3**

* = Less than 500.

[1] State totals may not add due to rounding.

HOGS: Number of operations, pig crop, number and pounds sold, price, and value, by islands, 1983-87

Year	Number of operations[1]		Pig crop[2]		Number sold[3]	Pounds sold (live weight)[4]	Farm price (live weight)	Value of sales
	Total	10+	December-May	June-November				
	— Number —		———— 1,000 head ————			1,000 pounds	Dollars per hundredweight	1,000 dollars
				STATE[5]				
1983..........	650	420	32	35	59	10,257	75.80	7,775
1984..........	650	420	31	35	60	10,504	77.00	8,088
1985..........	650	430	35	41	60	10,478	76.30	7,995
1986..........	600	410	32	36	65	11,524	76.10	8,770
1987	**600**	**410**	**30**	**36**	**63**	**11,241**	**75.70**	**8,509**
				HAWAII				
1983..........	85	50	2.7	2.8	5.4	975	80.50	785
1984..........	85	55	2.4	2.9	4.7	868	84.00	729
1985..........	85	60	3.0	3.6	4.7	933	81.50	760
1986..........	80	60	3.0	3.2	5.3	997	78.00	778
1987	**80**	**60**	**2.4**	**2.6**	**4.9**	**918**	**77.00**	**707**
				KAUAI				
1983..........	120	50	2.3	2.8	4.9	763	83.00	633
1984..........	125	55	2.6	3.0	4.7	791	84.50	668
1985..........	120	55	3.1	4.0	5.0	919	82.50	758
1986..........	110	50	3.1	3.6	6.7	1,320	81.00	1,069
1987..........	**120**	**50**	**3.3**	**4.0**	**7.0**	**1,393**	**80.00**	**1,114**
				MAUI/MOLOKAI				
1983..........	115	85	7.3	8.2	13.4	2,402	80.00	1,922
1984..........	105	70	6.0	6.9	13.3	2,425	80.00	1,940
1985..........	110	75	8.3	9.8	13.7	2,404	80.50	1,935
1986..........	100	70	6.5	7.1	13.4	2,398	80.00	1,918
1987..........	**100**	**75**	**6.5**	**7.6**	**13.3**	**2,373**	**81.50**	**1,934**
				OAHU				
1983..........	330	235	19.7	21.2	35.4	6,117	72.50	4,435
1984..........	335	240	19.9	22.3	37.5	6,420	74.00	4,751
1985..........	335	240	21.0	23.2	36.6	6,222	73.00	4,542
1986..........	310	230	19.4	22.1	39.4	6,809	73.50	5,005
1987..........	**300**	**225**	**17.8**	**21.8**	**37.5**	**6,557**	**72.50**	**4,754**

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[1] Difference between "Total" and "10+" is operations having 1-9 hogs; current year number of operations is preliminary.

[2] Number of pigs born during the 6-month period which were still on hand or were sold.

[3] Excludes interfarm sales; includes custom slaughter for home use; includes direct sales on farms to consumers.

[4] Excludes custom slaughter for use on farms where produced and interfarm sales.

[5] State totals may not add for number of operations and pig crop due to rounding. Sales and value data are for the 12-month period, December of the previous year through November of the following year.

HOGS

HOGS: Commercial slaughter and farm price, State of Hawaii, 1983-87

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average
						Number of head -- 1,000 head[1] [2]							
1983......	3.2	3.3	3.6	3.5	3.6	3.7	3.7	3.8	3.6	3.5	3.5	4.9	44.0
1984......	3.4	3.3	3.6	3.6	3.6	3.7	3.7	3.7	3.3	3.7	3.8	4.7	44.1
1985......	3.3	3.4	3.5	3.8	3.7	3.5	3.7	3.8	3.4	3.5	3.5	4.6	43.7
1986......	3.5	3.3	3.5	3.6	3.7	3.4	3.6	3.9	3.7	3.9	3.5	5.1	44.7
1987	**3.6**	**3.4**	**3.7**	**3.6**	**3.5**	**3.9**	**3.7**	**3.6**	**3.4**	**3.7**	**3.5**	**4.7**	**44.3**
						Pounds slaughtered -- 1,000 pounds, dressed weight[1] [3]							
1983......	481	471	495	501	516	501	515	503	497	497	476	672	6,125
1984......	484	462	505	514	524	524	518	495	442	552	534	676	6,230
1985......	470	491	514	533	560	479	509	538	466	500	534	663	6,257
1986......	501	471	497	513	547	503	546	530	550	601	523	760	6,542
1987	**553**	**489**	**536**	**523**	**517**	**574**	**540**	**528**	**481**	**526**	**520**	**670**	**6,457**
						Farm price -- Cents per pound, dressed weight[4]							
1983......	102.0	101.5	100.0	99.5	101.5	100.5	101.5	99.5	101.5	102.0	103.5	102.5	101.0
1984......	99.5	104.5	101.5	102.5	103.0	101.5	102.5	102.5	104.0	105.0	102.5	101.5	102.5
1985......	102.5	102.5	102.5	102.5	99.5	102.5	101.0	101.0	101.5	102.0	102.0	102.0	101.5
1986......	102.0	102.0	101.5	102.5	101.0	100.0	101.5	101.5	101.5	102.0	100.5	100.5	101.5
1987	**101.0**	**100.5**	**100.5**	**100.0**	**101.5**	**101.5**	**100.0**	**101.0**	**101.5**	**102.0**	**102.0**		**101.0**

[1] Excludes non-inspected farm slaughter; includes custom slaughter and live hog inshipments from the mainland for slaughter.

[2] Sum of monthly estimates may not add to annual total due to rounding.

[3] To convert dressed weight to live weight: Divide by 0.75 or multiply by a factor of 1.3333.

[4] Annual average price is for marketing year December-November.

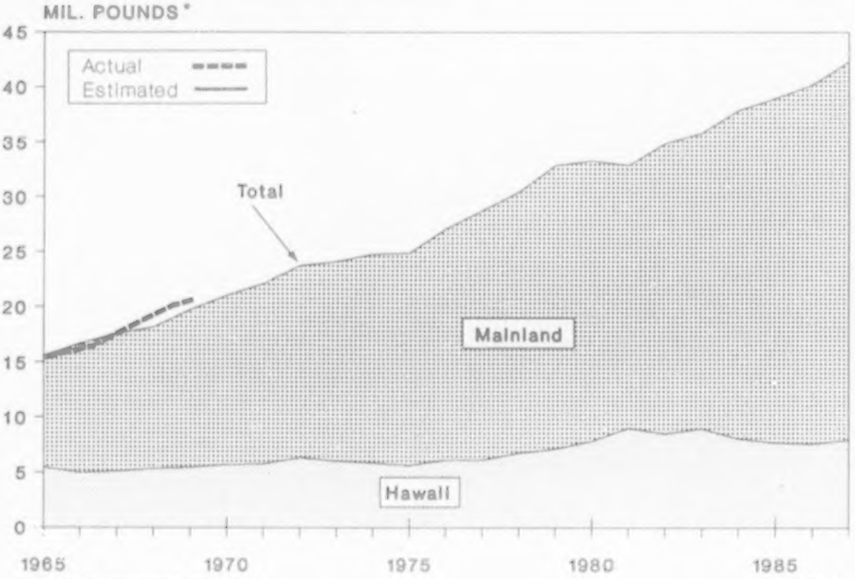
HOGS AND PIGS: Inventory and disposition, State of Hawaii, 1983-87

Year	Inventory December 1 previous year	Annual pig crop	Inshipments	Marketings	Farm slaughter	Deaths	Inventory December 1
				1,000 head			
1983......	49	67	*	59	3	6	48
1984......	48	66	*	60	3	4	47
1985......	47	76	*	60	3	5	55
1986......	55	68	*	65	3	5	50
1987	50	66	*	63	2	4	47

* = Less than 500 head.

CHICKENS AND BROILERS: MARKET SUPPLY

MARKET SUPPLY: Chickens and Broilers, State of Hawaii, 1965-87



* Ready to-cook weight.

HASS

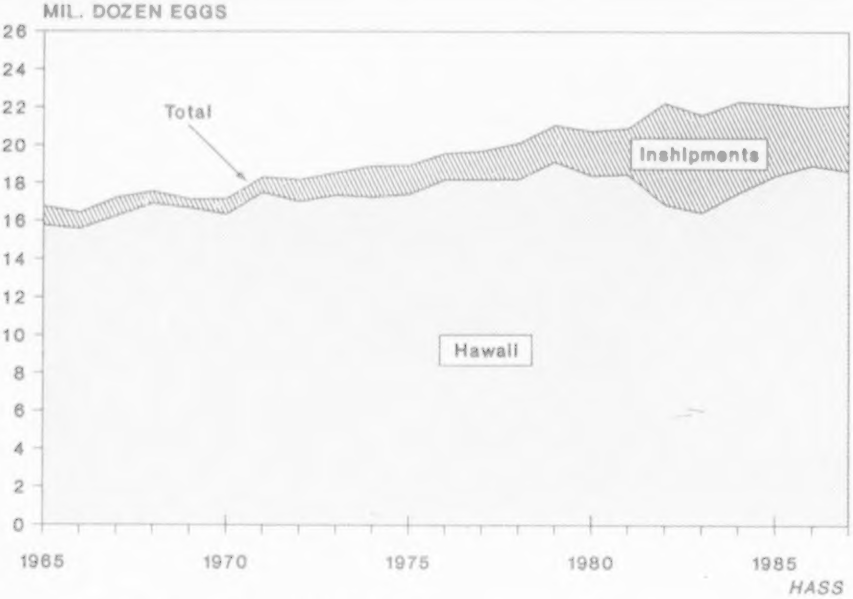
MARKET SUPPLY: Poultry meat, State of Hawaii, 1978-87

Commodity	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
	1,000 pounds (ready-to-cook weight)									
Broilers:										
Inshipments	23,682	25,795	25,455	23,850	26,357	26,932	29,785	31,305	32,619	**34,335**
Hawaii	5,816	5,896	6,569	7.673	7,534	8,023	7,346	6,723	6,692	**7,106**
Total	29,498	31,691	32,024	31,523	33,891	34,955	37,131	38,028	39,311	**41,441**
Other chickens:										
Hawaii	970	1,240	1,321	1,373	1,037	924	756	983	937	**882**
Total chickens:										
Inshipments	23,682	25,795	25,455	23,850	26,357	26,932	29,785	31,305	32,619	**34,335**
Hawaii	6,786	7,136	7,890	9,046	8,571	8,947	8,102	7,706	7,629	**7,988**
Total[1]	30,468	32,931	33,345	32,896	34,928	35,879	37,887	39,011	40,248	**42,323**

[1] Beginning 1970 total supply was estimated and mainland inshipments derived. See page 100 for detailed explanation of the estimating procedure.

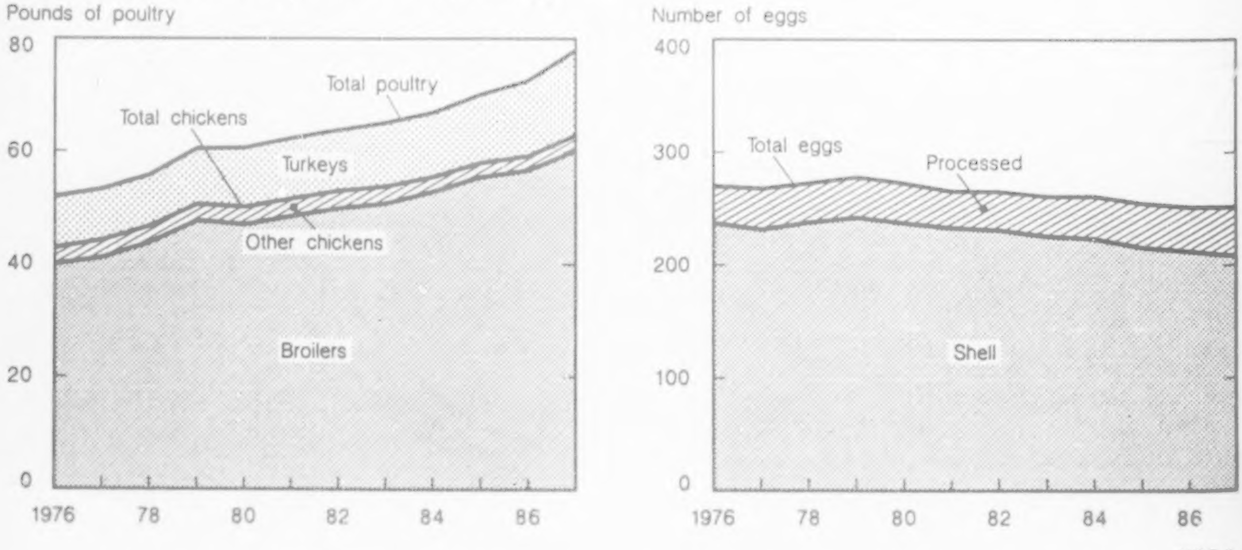
EGGS: MARKET SUPPLY

MARKET SUPPLY: Eggs, State of Hawaii, 1965-87



HASS

U. S. Per Capita Consumption of Poultry and Eggs



USDA

MARKET SUPPLY: Eggs, State of Hawaii, 1983-87

Commodity	1983	1984	1985	1986	1987
			1,000 dozens		
Eggs, shell:					
Inshipments	5,158	4,810	3,842	3,066	**3,497**
Hawaii	16,442	17,475	18,375	18,917	**18,608**
Total	21,600	22,285	22,217	21,983	**22,105**

Source of inshipment data: Market News Service, Hawaii Department of Agriculture.

CHICKENS: December 1 inventory by class, by islands, 1983-87

Year	All chickens (excluding broilers)	Number of layers			Non-laying pullets		Other chickens (excluding broilers)
		Hens 1 year +	Pullets under 1 year	Total	Over 3 months	Under 3 months	
	Thousands						
	STATE						
1983	1,140	577	352	929	106	105	*
1984	1,195	559	385	944	128	123	*
1985	1,210	609	391	1,000	92	118	*
1986	1,185	609	364	973	107	105	*
1987	**1,212**	**598**	**384**	**982**	**124**	**106**	*
	HAWAII/KAUAI/MAUI/MOLOKAI[1]						
1983	179	81	69	150	15	14	*
1984	172	73	83	156	5	11	*
1985	168	80	71	151	6	11	*
1986	206	80	112	192	9	5	*
1987	**194**	**137**	**31**	**168**	**14**	**12**	*
	OAHU						
1983	961	496	283	779	91	91	*
1984	1,023	486	302	788	123	112	*
1985	1,042	529	320	849	86	107	*
1986	979	529	252	781	98	100	*
1987	**1,018**	**461**	**353**	**814**	**110**	**94**	*

* = Less than 500.

[1] Kauai, Maui and Molokai combined with Hawaii to avoid disclosure of individual operations.

EGG-TYPE PULLET CHICK PLACEMENTS, State of Hawaii, 1983-87[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
	1,000 chicks												
1983	68	25	97	31	17	100	40	74	23	55	27	36	593
1984	80	24	78	10	40	79	29	86	4	79	53	42	604
1985	71	25	101	8	112	15	33	72	4	117	0	23	581
1986	73	7	107	31	36	32	*	130	25	87	34	37	599
1987	**76**	**22**	**94**	**22**	**0**	**102**	**35**	**128**	**49**	**78**	**15**	**0**	**621**

* = Less than 500.

[1] Inshipments plus local hatch.

POULTRY

CHICKENS: December 1 number of operations, sales, price, and value, by islands, 1983-87[1]

Year	Operations	Number sold	Pounds sold (live weight)[2]	Average price (live weight)[3]	Value of sales
	Number	Thousands	1,000 pounds	Cents per pound	1,000 dollars
			STATE		
1983	55	377	1,320	13.6	180
1984	55	300	1,080	18.0	194
1985	55	390	1,404	16.7	234
1986	55	362	1,339	14.4	193
1987	**55**	**350**	**1,260**	**15.2**	**192**
			HAWAII/KAUAI/MAUI/MOLOKAI[4]		
1983	36	72	243	33.7	82
1984	35	61	214	37.4	80
1985	35	66	239	36.5	87
1986	36	65	238	34.5	82
1987	**36**	**59**	**207**	**30.9**	**64**
			OAHU		
1983	19	305	1,077	9.1	98
1984	20	239	866	13.2	114
1985	20	324	1,165	12.6	147
1986	19	297	1,101	10.1	111
1987	**19**	**291**	**1,053**	**12.1**	**128**

[1] Data are for December-November marketing year.

[2] To convert live weight to ready-to-cook weight, multiply by a conversion factor of 0.70.

[3] Equivalent delivered processing plant.

[4] Kauai, Maui, and Molokai combined with Hawaii to avoid disclosure of individual operations.

CHICKENS: Slaughter and price, State of Hawaii, 1983-87[1]

Month	Number sold					Pounds sold (live weight)[2]					Average farm price (live weight)[3]				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	**1987**
	1,000 birds					1,000 pounds					Cents per pound				
December	33	37	21	24	29	110	133	72	87	105	11.5	12.0	20.0	13.5	**15.0**
January	20	25	27	41	35	74	94	103	153	130	14.0	18.0	17.0	12.5	**12.5**
February	55	23	36	23	25	192	81	127	89	88	13.5	17.0	17.0	14.0	**17.0**
March	36	8	34	14	22	125	27	124	51	80	11.5	24.5	18.0	23.0	**16.0**
April	32	20	41	33	35	104	74	148	125	123	12.5	21.5	15.5	15.0	**13.5**
May	34	21	26	30	31	119	76	97	113	107	14.5	22.0	19.5	13.5	**16.0**
June	44	15	43	40	24	160	55	154	144	92	14.5	23.0	17.0	14.5	**18.0**
July	37	17	40	42	22	133	62	145	154	81	14.5	22.0	15.0	13.5	**15.0**
August	28	32	31	29	21	101	111	110	103	94	13.0	18.5	17.5	16.0	**17.5**
September	25	35	31	36	64	87	123	107	134	228	14.5	17.0	17.0	13.5	**14.5**
October	15	38	22	22	15	53	139	77	80	53	14.5	16.0	16.0	11.5	**19.0**
November	18	29	38	28	27	62	105	140	106	99	16.5	16.5	14.0	17.0	**14.0**
Total or average	377	300	390	362	350	1,320	1,080	1,404	1,339	1,260	13.6	18.0	16.7	14.4	**15.2**

[1] Data are for December-November marketing year.

[2] To convert live weight to ready-to-cook weight, multiply by a conversion factor of 0.70.

[3] Equivalent delivered processing plant.

EGGS: December 1 number of operations, number of layers, production, sales, price, and value, by islands, 1983-87[1]

Year	Operations with layers		Average number of layers	Average production per layer	Production-tion[3]	Average price[4]	Value sales
	Total[2]	100 +					
	Number		1,000 birds	Eggs	Million eggs	Cents per dozen	1,000 dollars
				STATE[5]			
1983	55	19	855	231	197.3	85.4	14,041
1984	55	21	939	223	209.7	88.9	15,535
1985	55	20	983	224	220.5	76.3	14,020
1986	55	21	987	230	227.0	71.1	13,450
1987	**55**	**21**	**975**	**229**	**223.3**	**76.8**	**14,291**
				HAWAII/KAUAI/MAUI/MOLOKAI[6]			
1983	36	8	143	225	32.2	98.0	2,629
1984	35	8	143	224	32.0	102.0	2,726
1985	35	7	145	235	34.1	89.5	2,543
1986	36	9	154	242	37.3	78.0	2,428
1987	**36**	**9**	**176**	**247**	**43.5**	**83.0**	**3,009**
				OAHU			
1983	19	11	712	232	165.1	83.0	11,412
1984	20	13	796	223	177.7	86.5	12,809
1985	20	13	838	222	186.4	74.0	11,477
1986	19	12	833	228	189.7	69.5	11,022
1987	**19**	**12**	**799**	**225**	**179.8**	**75.5**	**11,282**

[1] Annual number of layers, egg production sales, price, and vaue are a December-November marketing year.

[2] Difference between "Total" and "100 +" is operations having 1-99 layers.

[3] Home consumption less than 0.5 million eggs included.

[4] Equivalent delivered processing plant.

[5] Sum of island estimates may not add to State total due to rounding.

[6] Kauai, Maui, and Molokai combined with Hawaii to avoid disclosure of individual operations.

POULTRY

EGGS: Number of layers, production, and price, State of Hawaii, 1983-87

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total or average[1]
	Average number of layers on hand during month – 1,000 layers												
1983......	839	843	841	854	860	861	858	860	856	855	898	915	855
1984......	908	920	928	944	950	949	958	970	961	934	933	958	939
1985......	980	975	961	972	987	991	983	983	993	1,003	1,005	1,007	983
1986......	1,011	999	1,008	1,010	986	972	948	952	979	990	984	978	987
1987	**973**	**957**	**973**	**985**	**969**	**969**	**973**	**984**	**978**	**973**	**985**		**975**
	Egg production – Million eggs[2]												
1983......	15.8	14.9	17.4	16.6	16.9	16.3	16.8	17.0	16.5	16.9	16.7	17.6	197.3
1984......	17.4	16.4	18.0	17.4	18.2	18.1	18.7	18.2	16.8	15.5	16.4	18.5	209.7
1985......	18.8	16.5	18.0	17.7	18.8	18.3	18.9	19.0	18.5	19.0	18.5	19.0	220.5
1986......	19.3	17.9	19.9	19.7	19.5	18.3	18.9	18.7	18.3	19.2	18.3	18.6	227.0
1987	**18.6**	**17.2**	**19.6**	**19.0**	**19.5**	**18.5**	**19.0**	**18.8**	**17.8**	**18.5**	**18.2**		**223.3**
	Average farm price – Cents per dozen[3]												
1983......	88.0	87.0	87.0	87.0	86.0	84.5	85.0	84.0	83.5	83.0	81.0	81.0	85.4
1984......	90.0	91.0	91.5	96.5	96.0	91.5	89.5	89.5	84.0	82.0	83.0	87.0	88.9
1985......	89.0	86.0	87.5	85.0	79.5	74.0	69.5	70.5	65.0	62.0	62.5	62.5	76.3
1986......	71.0	70.5	72.5	73.5	73.0	71.5	72.5	72.0	71.0	72.0	71.0	76.0	71.1
1987	**76.0**	**74.5**	**79.5**	**78.5**	**78.5**	**78.0**	**77.5**	**76.5**	**75.5**	**76.0**	**75.0**		**76.8**

[1] Annual data are for a December-November marketing year.
[2] Annual totals may not add due to rounding.
[3] Equivalent delivered processing plant.

EGG-FEED RATIO, State of Hawaii, 1983-87[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
	Pounds											
1983........	7.7	7.6	7.6	7.3	7.2	7.0	7.1	6.7	6.6	6.5	6.1	6.8
1984........	6.1	7.1	7.1	7.2	7.6	7.5	7.0	7.0	7.0	6.9	6.8	6.9
1985........	7.4	7.2	7.3	7.1	6.6	6.4	6.0	6.1	5.7	5.5	5.6	5.6
1986........	6.3	6.3	NA	6.5	NA	NA	6.6	NA	NA	6.7	NA	NA
1987	**7.7**	**NA**	**NA**	**7.7**	**NA**	**NA**	**7.6**	**NA**	**NA**	**7.5**	**NA**	**NA**

[1] Number of pounds of laying feed, equivalent in value to 1 dozen eggs.

BROILER-TYPE CHICK PLACEMENTS, State of Hawaii, 1983-87[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
	1,000 chicks												
1983......	214	241	247	253	236	263	324	227	216	219	273	271	2,984
1984......	206	245	213	250	304	230	217	236	206	261	215	217	2,800
1985......	255	191	194	198	224	201	219	187	180	231	205	217	2,502
1986......	213	199	185	198	196	183	219	184	193	215	217	232	2,434
1987	**184**	**193**	**202**	**245**	**209**	**200**	**241**	**186**	**210**	**194**	**188**	**242**	**2,494**

NA = Not available. Beginning February 1986 prices paid for feed quarterly only.
[1] Inshipments plus local hatch.

BROILERS: December 1 number of operations, sales, price, and value, State of Hawaii, 1983-87[1]

Year	Operations	Number sold[2]	Pounds sold (live weight)[2] [3]	Average price (live weight)[4]	Value of sales[2]
	Number	Thousands	1,000 pounds	Cents per pound	1,000 dollars
1983	9	2,891	10,697	50.0	5,349
1984	8	2,647	9,794	51.0	4,995
1985	7	2,359	8,964	52.0	4,661
1986	8	2,288	8,923	51.0	4,551
1987	8	**2,311**	**9,475**	**52.0**	**4,927**

[1] Data are for December-November marketing year.

[2] Includes home consumption which is less than 1 percent of production.

[3] To convert live weight to ready-to-cook weight, multiply by a conversion factor of 0.75.

[4] Equivalent delivered processing plant.

BROILERS: Slaughter and price, State of Hawaii, 1983-87[1]

Month	Number sold[2]					Pounds sold (live weight)[2] [3]					Average farm price (live weight)[4]				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
	1,000 birds					1,000 pounds					Cents per pound				
December	251	202	252	216	240	922	719	947	837	989	51.0	50.5	51.0	51.0	50.5
January	238	258	181	202	189	869	966	634	785	782	51.0	51.0	50.0	51.0	51.0
February	226	211	182	186	160	840	822	695	738	664	50.5	51.0	51.0	50.0	53.5
March	220	240	196	189	166	756	906	752	768	681	50.5	51.0	53.0	51.0	52.5
April	208	226	171	202	187	780	797	680	825	754	50.5	51.0	53.5	51.0	53.5
May	235	247	219	183	221	819	837	899	751	948	50.5	51.5	54.5	51.5	52.0
June	355	206	218	199	204	1,427	744	864	813	812	51.0	51.5	53.5	51.5	52.0
July	222	219	207	195	193	822	828	774	754	785	50.0	51.5	50.5	50.0	52.0
August	250	247	203	181	198	903	919	730	633	832	51.0	51.0	51.5	51.5	51.5
September	229	178	176	170	177	844	679	651	619	661	50.0	51.0	51.0	51.0	52.5
October	234	205	192	190	186	860	750	701	706	764	51.0	50.5	51.5	50.0	52.5
November	223	208	162	175	190	855	827	637	694	803	42.5	50.5	52.0	51.0	51.0
Total or average	2,891	2,647	2,359	2,288	2,311	10,697	9,794	8,964	8,923	9,475	50.0	51.0	52.0	51.0	52.0

[1] Data are for December-November marketing year.

[2] Includes home consumption which is less than 1 percent of production.

[3] To convert live weight to ready-to-cook weight, multiply by a conversion factor of 0.75.

[4] Equivalent delivered processing plant.

BROILER-FEED RATIO, State of Hawaii, 1983-87[1]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
	Pounds											
1983	3.5	3.5	3.4	3.3	3.3	3.3	3.3	3.2	3.0	3.0	2.5	3.1
1984	3.0	3.2	3.2	3.2	3.2	3.2	3.2	3.4	3.5	3.6	3.6	3.6
1985	3.6	3.6	3.8	3.8	3.9	3.9	3.7	3.8	3.7	3.8	3.9	3.8
1986	3.8	3.7	NA	3.8	NA	NA	3.7	NA	NA	3.9	NA	NA
1987	**4.0**	NA	NA	**4.0**	NA	NA	**4.0**	NA	NA	**3.9**	NA	NA

NA = Not available. Beginning February 1986 prices paid for feed quarterly only.

[1] Number of pounds of broiler grower equal in value to 1 pound of broiler live weight.

FEED PRICES

FEED PRICES: Average price paid by farmers for feed, State of Hawaii, 1983-87

Year	Jan.	Apr.	July	Oct.	Annual average
			Dollars per ton		
			CHICK STARTER		
1983	260	275	275	295	276
1984	295	295	290	255	284
1985	255	255	245	240	249
1986	240	240	245	235	240
1987	**230**	**230**	**230**	**235**	**231**
			BROILER GROWER		
1983	290	305	305	335	309
1984	335	320	320	285	315
1985	280	280	275	270	276
1986	270	270	270	255	266
1987	**255**	**255**	**255**	**260**	**256**
			LAYING FEED		
1983	230	240	240	255	241
1984	265	255	260	245	256
1985	240	240	230	225	234
1986	225	225	220	215	221
1987	**210**	**210**	**210**	**210**	**210**
			DAIRY FEED, 20-PERCENT PROTEIN		
1983	240	240	245	250	244
1984	265	260	250	230	251
1985	230	235	225	220	228
1986	220	215	215	205	214
1987	**205**	**205**	**200**	**205**	**204**
			ROLLED BARLEY		
1983	186	192	190	204	193
1984	208	205	204	185	201
1985	183	182	173	167	176
1986	163	158	135	126	146
1987	**126**	**117**	**119**	**121**	**121**
			ROLLED CORN		
1983	194	214	231	224	216
1984	219	220	229	210	220
1985	201	201	197	188	197
1986	188	187	185	174	184
1987	**174**	**164**	**165**	**167**	**168**
			ALFALFA PELLETS		
1983	197	190	191	185	191
1984	182	186	192	185	186
1985	190	180	184	185	185
1986	178	191	178	177	181
1987	**176**	**176**	**163**	**159**	**169**
			PINEAPPLE BRAN		
1983	140	140	140	140	140
1984	140	140	147	147	144
1985	147	147	140	140	144
1986	140	119	119	119	124
1987	**119**	**119**	**119**	**119**	**119**

FEED: Inshipments from all sources, State of Hawaii, 1983-87

Commodity	1983	1984	1985	1986	1987[1]
			Tons		
Feed Grains					
Barley[2]	137,701	50,781	41,524	42,292	
Corn	37,772	35,125	32,459	24,175	
Mixed	37	66	232	291	
Oats	1,342	759	663	276	
Sorghum	211	214	213	242	
Wheat	12,734	1,501	3,300	1,106	
Total	89,797	88,446	78,391	68,382	
Mixed Feeds					
Calf	371	411	598	641	
Cattle	3,196	5,381	3,346	1,617	
Dairy	10,305	5,380	3,032	2,830	
Horse	1,245	1,686	2,452	1,726	
Pigeon	516	604	673	159	
Poultry (including scratch)	5,613	5,178	5,364	4,335	
Rabbit	18	30	34	38	
Swine	3,266	3,096	2,860	3,158	
Other mixed	9	35	94	23	
Total	24,539	21,801	18,453	14,527	
Alfalfa Products					
Cubes, pellets, and hay	30,192	[2]32,279	[2]24,087	19,495	
Protein Feeds					
Copra products[3]	1,969	1,376	972	257	
Cottonseed products[2]	9,355	9,099	8,316	8,180	
Cottonseed, whole	6,009	[2]6,946	5,496	[2]6,923	
Meat and bone meal	[2]1,399	1,351	1,353	861	
Rape seed products	0	[3]511	0	0	
Soybean meal	[2]7,792	10,281	12,320	8,700	
Other protein	0	0	[2]169	458	
Total	26,524	29,564	28,626	25,379	
Other Feedstuff					
Almond hulls and pellets	4,944	4,602	5,793	1,501	
Beet pulp and pellets	2,677	301	1,742	3,265	
Cassava (Tapioca) pellets	0	0	[3]4,629	0	
Corn gluten	0	0	618	2,645	
Cottonseed hulls and pellets	1,560	[2]1,334	427	830	
Grain screenings and pellets	2,939	4,626	1,784	201	
Grass forage	0	1,473	0	0	
Rye grass screenings	0	749	240	0	
Miscellaneous/unspecified	9,823	6,439	5,369	5,141	
Total	21,943	19,524	20,602	13,583	
Total Feed Inshipments	192,995	191,614	170,159	141,366	

[1] Data not available. Discontinued beginning 1987.

[2] Includes foreign.

[3] Foreign.

Source: Market News Service, Hawaii Department of Agriculture.

LABOR

AGRICULTURAL EMPLOYMENT: Workers on farms, State of Hawaii, annual averages, 1983-87[1]

Year	Total farm employment			Hired workers by type of farm		
	Self employed farm operators	Unpaid family members	Hired workers	Sugar	Pineapple	Other
1983	2,500	1,500	13,000	4,850	3,250	4,600
1984	2,200	1,300	11,800	4,650	2,550	4,700
1985	2,200	1,200	10,600	4,150	1,950	4,400
1986	2,050	1,200	9,700	3,975	2,025	3,675
1987	**2,600**	**1,100**	**10,700**	**3,810**	**2,050**	**4,750**

[1] Due to program changes annual averages are not comparable. Average for 1983 is July only; 1984 July and October; and 1985, 1986, and 1987, average of January, April, July, and October surveys.

AGRICULTURAL EMPLOYMENT: Total workers on farms, State of Hawaii, 1987[1]

Island	Self employed farm operators				Unpaid workers[2]				Hired workers			
	Jan.	Apr.	Jul.	Oct.	Jan.	Apr.	Jul.	Oct.	Jan.	Apr.	Jul.	Oct.
Hawaii	1,450	1,650	1,950	1,850	800	700	800	700	3,500	3,350	4,200	4,050
Kauai	150	150	200	150	50	50	50	50	1,250	1,250	1,300	1,250
Maui/Molokai/ Lanai	250	250	300	250	150	150	150	100	2,550	2,800	3,250	2,500
Oahu	350	450	550	500	200	100	200	150	2,600	2,600	2,950	2,950
State[3]	2,200	2,500	3,000	2,750	1,200	1,000	1,200	1,000	10,000	10,000	11,700	11,000

[1] Estimates for week which includes 12th of each survey month. [2] Includes family members and others working 15 or more hours per week. [3] Sum of island estimates may not add to State total due to rounding.

AGRICULTURAL EMPLOYMENT: Hired workers by type of farm, State of Hawaii, 1987[1]

Island	Sugar				Pineapple				Other			
	Jan.	Apr.	Jul.	Oct.	Jan.	Apr.	Jul.	Oct.	Jan.	Apr.	Jul.	Oct.
Hawaii	1,250	1,200	1,500	1,250	--	--	--	--	2,300	2,150	2,700	2,800
Kauai	1,000	1,000	1,000	1,000	--	--	--	--	250	250	300	250
Maui/Molokai/ Lanai	1,200	1,100	1,000	700	900	1,200	1,650	1,250	500	500	600	550
Oahu	500	500	500	550	750	800	850	800	1,350	1,300	1,600	1,600
State[2]	3,950	3,800	4,000	3,500	1,650	2,000	2,500	2,050	4,400	4,200	5,200	5,200

-- = Negligible or not applicable. [1] Estimates for week which includes 12th of each survey month. [2] Sum of island estimates may not add to State total due to rounding.

AGRICULTURAL EMPLOYMENT: Wage rates by method of pay and type of work, State of Hawaii, 1987[1]

Type of work performed	Hawaii				Annual average		
	Jan.	Apr.	Jul.	Oct.	Hawaii	California	U.S.
	Dollars/hour						
All hired farm workers	7.84	8.15	8.21	8.18	8.10	5.90	4.87
Field and Livestock workers	6.61	7.68	7.82	7.62	7.53	5.41	4.57
Supervisors	10.73	11.26	11.24	11.36	11.16	10.01	7.76
Others	8.79	7.83	7.88	8.43	8.47	7.66	6.45

[1] Perquisites such as room and board, housing, etc., are provided some workers in all categories, except where footnoted otherwise, in addition to wage rates shown.

DEFINITION OF TERMS

AGRICULTURE entails all operations performed on a "farm" in connection with planting, growing, and harvesting of crops; raising and feeding of livestock and poultry, and management. All operations in connection with preparation of farm products for market where the preparation does not alter the form of the product and transportation to the first delivery point. In Hawaii, the first delivery point is defined as the processing plant or packinghouse door or other receivers' establishment for marketings on the island of production. For off-island marketings, the first delivery point is generally the shipper's warehouse.

FARM is a place with estimated (or expected) annual sales of agricultural products of at least $1,000.

CROP PRODUCTION is the estimated amount of crop harvested and transferred at the first delivery point. Production estimates of vegetables and fruits include the quantity for fresh market and processing use.

ACREAGE IN CROP is the total acreage standing in a specific crop regardless of age or condition unless it has been declared abandoned by the operator.

ACREAGE HARVESTED is the total area harvested or partially harvested during the reporting period. A permanent or semi-permanent planting that was harvested for only a portion of the year is counted in its entirety. Acreage lost before maturity due to natural or economic factors is not included. Acreage harvested and planted repeatedly during the year is counted each time.

YIELD is the average production per acre of merchantable quality harvested and sold or utilized. This is derived by dividing total production by harvested acres.

LIVESTOCK OPERATION is defined as a place that has one or more head of the species on hand at any time during the year. It does not have to meet the definition of a farm.

LIVESTOCK PRODUCTION is the estimated amount of livestock and livestock products sold. This includes allowance for amount used on farms where produced.

FARM PRICE is a computed price to value agricultural production which may or may not reflect the average price at which actual transfer of ownership took place but which is comparable with the definition of "agriculture". See "agriculture" for the definition of pricing point.

MARKET SUPPLY includes pounds of product sold in Hawaii to both Armed Forces and civilians (outshipments excluded) plus products shipped in for civilian use. Direct inshipments to the Armed Forces are excluded.

SAMPLING METHODS AND ESTIMATION

The Hawaii Agricultural Statistics Service uses a variety of sampling techniques to produce current agricultural statistics about crops, livestock, prices, farm labor, and other information relating to the agricultural economy.

Data is collected, summarized and estimates are prepared. These estimates then pass through the Agricultural Statistics Board of the U. S. Department of Agriculture where, for major items, Hawaii estimates become part of National totals and enter the official data base for agriculture. National and State estimates are published according to a schedule set one year in advance.

The Hawaii Agricultural Statistics Service conducts many of its surveys by virtually complete **ENUMERATION** of certain parts of the population. This is unusual compared to procedures in other states but is feasible in Hawaii due to the relatively small size of certain categories of the farm universe or the extreme concentration of ownership. Vegetable and poultry surveys are among those where complete enumeration is the usual procedure.

LIST SAMPLING is a common means of data collection. Lists of farm operators are well suited for the low cost collection of information by mail. Supplementary information is included within the frame that allows the use of efficient stratified sample designs. A major disadvantage of this method is the constant change in the list frame which can never be perfect. In Hawaii, cattle and hog surveys are examples of stratified list sample designs.

AREA FRAME SAMPLING can be used alone or in conjunction with the list frame. The frame consists of an aggregation of identifiable units of land or segments which may be sampled. The frame is complete and does not suffer the type of deterioration over time as does a list frame.

MULTIPLE-FRAME SAMPLING is the use of two frames. It takes advantage of the best attributes of the area frame and the list frame, produces unbiased estimates and allows measurement of the sampling error. This survey method is currently used for agricultural employment and wage rate surveys.

OBJECTIVE YIELD SURVEYS provide information from direct counts, measurements and weights of the crop made from small plots in a probability selection of sample fields. Currently, this method is used for forecasting papaya yield four months in advance of harvest. Research is underway to determine the feasibility of using this methodology on other crops.

CHECK DATA is used in addition to producer surveys to establish final production and marketings. These include processor receipts, slaughter, vacuum cooler volume, public tax records, and inspections. Unloads at Honolulu and wholesale prices as reported by the Market News Service, are an important check data source. Also, grower organizations, such as the Hawaiian Sugar Planters' Association, provide an efficient means of obtaining information concerning sugar production.

HAWAII
AGRICULTURAL
STATISTICS
SERVICE

REPORTS ISSUED

Report	Frequency
CROP RELEASES	
Avocados	Annual (May)
Bananas - Acreage	Annual (March)
Bananas - Production & Price	Monthly
Coffee	Bi-annual (Jan., Aug.)
Fresh Fruit	Annual (May)
Ginger Root	Annual (July)
Guavas	Annual (May)
Macadamia Nuts	Bi-annual (Jan., July)
Papayas - Acreage, Production & Price	Monthly
Pineapples - Acreage & Production	Annual (Feb.)
Processed Fruit	Annual (May)
Sugar - Acreage & Production	Monthly (Aug. - Nov.)
Taro	Annual (Jan.)
Vegetables	Annual (April)
Vegetables - Acreage, Production & Price	Monthly
Vegetables - Expected Honolulu Vegetable Supply	Weekly
Vegetables Processed - Quantity & Price	Annual (March)
FLORICULTURE AND NURSERY PRODUCTS	
Anthuriums - Exports	Monthly
Dendrobium Orchids	Annual (May)
Floriculture and Nursery Products	Annual (May)
Out-of-State Sales	Annual (May)
Poinsettias	Annual (Oct.)
LIVESTOCK RELEASES	
Cattle - Jan. 1, Inventory & Calf Crop	Annual (Feb.)
Cattle - Slaughter and Pasture Condition	Monthly
Chickens & Eggs	Monthly
Hogs - Dec. 1, Inventory & Pig Crop	Annual (Jan.)
Hogs - Slaughter	Monthly
Honey	Annual (Feb.)
Milk - Production, Cow Numbers & Prices	Monthly
WEEKLY CROP WEATHER	Weekly
OTHER PUBLICATIONS	
Agricultural Labor & Wage Rates	Quarterly (Feb., May, Aug., Nov.)
STATISTICS OF HAWAIIAN AGRICULTURE	Annual (July)

The above reports may be obtained by contacting the Hawaii Agricultural Statistics Service, P. O. Box 22159, Honolulu, HI 96822-0159 (Office - 1428 S. King St., Honolulu, HI 96814-2512).

EXPLANATION OF GRAPHS AND TABLES ON PAGES 81 AND 87

BEEF-VEAL SUPPLY: Historical beef-veal supply data consists of all Hawaii production, carcass weight basis, foreign imports, converted to carcass weight equivalent and mainland inshipments, weight-as-shipped. Foreign and mainland inshipments of processed beef are excluded. Also, no adjustment is made for changes in inventory. Estimated supplies are derived as a function of U. S. per capita consumption of beef and veal, and Hawaii's de facto population (excludes the Armed Forces). Yearly historical data from 1950-1970 on Hawaii production, U. S. mainland, and foreign inshipments were totaled to serve as the dependent variable with which the supply equation was estimated. The resulting equation indicated Hawaii beef supply with a correlation coefficient of .98.

PORK SUPPLY: All historical and estimated pork supply data involved dressed weight of pork with the exception of mainland inshipments which, at times, includes live hogs shipped into Hawaii for slaughter. Foreign and mainland inshipments of processed pork are excluded. Estimated supplies are derived as a function of U. S. per capita consumption of pork and Hawaii's de facto population (excludes the Armed Forces). Yearly historical data from 1950-1969 on Hawaii production, U. S. mainland, and foreign inshipments were totaled to serve as the dependent variable in estimating a market supply equation. The resulting equation indicated Hawaii pork supply with a correlation coefficient of .90.

CHICKEN-BROILER SUPPLY: All historical chicken-broiler poundage data, as well as estimated supplies, are expressed on a ready-to-cook basis. Estimated supplies are derived as a function of U. S. per capita consumption and Hawaii's de facto population (excludes the Armed Forces). Yearly historical data from 1950-1969 on U. S. mainland inshipments and Hawaii production was totaled to serve as the dependent variable in estimating the supply equation. The resulting equation indicated Hawaii chicken-broiler supply with a correlation coefficient of .99.

Revisions to prior years are made when final figures on population and per capita consumption are available.

PHOTOGRAPHY ACKNOWLEDGEMENTS

Special thanks goes to the Hawaiian Sugar Planters' Association for their cooperation and very much appreciated assistance in providing photographs and material for this years feature crop, "Sugar".

Cover photo: Hawaiian Commercial & Sugar Company's fields on Maui, courtesy of Alexander & Baldwin, Inc.

General Summary: Watermelon harvesting at Jefts farm, Island of Molokai, photo by Renan Mahikoa, HASS staff, page 4.

Crop highlights: Harvesting lettuce, photo by Steve Fukuda, County Extension Agent, page 16.

Weather summary: Ginger root field, Hilo, Hawaii, Photo by Arthur Osaki, HASS staff, page 18.

Sugar feature: Loading cane after harvesting for delivery to mill, photo courtesy Alexander & Baldwin, page 20.

Cutting cane for seed, photo courtesy HSPA, page 23.

Eggplant, Kilauea, Kauai, photo by Steve Fukuda, County Extension Agent, page 56.

Cleaning the stems of watercress before bunching on Sumida farm, Island of Oahu, photo by Steve Fukuda, County Extension Agent, page 69.

Livestock summary: Feedlot cattle, Big Island Meat, Hamakua, Hawaii, Photo by Aubrey Davis, page 73.

Egg gathering on Mikilua Poultry Farm, Inc., Waianae, Oahu, page 91.